

S2-01-1

Puzzling the mosaic-elucidating functional roles of genes in ADHD pathophysiology

Renner, Tobias

University of Würzburg, Department of Child and Adolescent Psychiatry, Germany

Background: Altered neurotransmission plays a major role in the pathophysiology of ADHD. Molecular genetic approaches aim to reveal new candidates and their specific impact on functional levels.

Objectives/aims: In a differential approach we aimed to elucidate the potential role of *KCNJ6*, a gene involved in monoaminergic neurotransmission, in the pathophysiology of ADHD, especially in cognitive functions and reward processes.

Methods: Association between *KCNJ6* and ADHD was investigated in two independent samples. Further, the influence of rs7275707 on brain activation of ADHD patients and healthy controls during a continuous performance test (EEG) and in healthy probands during reward conditions (fMRI) was assessed.

Results: Association was found in the family-based design, but not in the adult case-control sample. A specific effect of rs7275707 on brain activation in ADHD patients and a general influence on reward related activation was detected.

Conclusions: Though association with the general ADHD phenotype was not confirmed, our results indicate a specific influence of *KCNJ6* on brain activation in ADHD and a role as general modulator in reward processes.

S2-01-2

Neural correlates of processing emotional stimuli in children and adolescents with ADHD: an fMRI study on serotonergic modulation

Zepf, Florian¹; Herpertz-Dahlmann, Beate¹; Gaber, Tilman Jakob¹; Helmbold, Katrin¹; Bubbenzer, Sarah¹; Fink, Gereon Rudolf²; Baumann, David¹

¹RWTH Aachen University, Department of Child and Adolescent Psychiatry, Germany; ²University of Cologne and Jülich Research Centre, Department of Neurology, Germany

Background: Children and adolescents with ADHD often show co-varying problems in affective regulation. The neurotransmitter

serotonin (5-HT) has been linked to affective and emotional processes, with evidence coming from human studies involving adults and pharmacological studies using the administration of SSRIs. However, studies in children and adolescents are scarce, and it is not known how an acute central nervous deficit in 5-HT synthesis affects affective and emotional processes in adolescents with ADHD. The present study investigated the effects of an acutely diminished central nervous 5-HT synthesis in combination with functional magnetic resonance imaging (fMRI) in order to study the neural correlates of processing emotional stimuli in adolescents with ADHD.

Methods: Male patients with ADHD aged 9–17 years received the rapid tryptophan depletion-test (RTD) Moja-De in a double-blind within-subject crossover-design. They participated on 2 days in the investigation, with the two testing days spaced 7 days apart. On one day they received the RTD-test Moja-De within an amino acid drink lacking tryptophan (TRP), the physiological precursor amino acid of 5-HT, thus leading to a diminished central nervous 5-HT synthesis. On a second day they received a TRP balanced amino acid mixture as a control condition. Under depletion/the control condition the participants had to do an emotional word-face matching task in an fMRI environment (Siemens Trio, 3T) in a rapid event-related task design.

Results and discussion: We will show imaging data on the serotonergic modulation of brain regions involved while the subjects performed the emotional word-face matching paradigm. Implications for neurocircuitries involved in affective, cognitive and emotional processing will be discussed.

S2-01-3

Neuronal inhibition and its modulation by TMS-neurotherapeutic perspectives for ADHD

Bender, Stephan

University of Dresden, Child and Adolescent Psychiatry, Germany

Background: The inhibition of unwanted movements is a core problem in attention deficit/hyperactivity disorder (ADHD). Transcranial magnetic stimulation (TMS) is a compelling method to assess and influence inhibition in the brain.

Objectives/aim: What can TMS tell us about inhibitory deficits in ADHD? Can these deficits be ameliorated by a TMS intervention (repetitive TMS)?

Methods: We assessed an inhibitory component of the EEG-response to TMS in 8–14-year-old ADHD children and whether a TMS intervention would influence this inhibition marker (N100).

Results: We found a reduced N100 in ADHD children. During a 1-Hz TMS intervention, there was a significant further decrease and no

normalization of this inhibitory EEG-response. There were no significant effects on hyperactive behaviour with this TMS-protocol.

Conclusions: The EEG-response to TMS reveals inhibition deficits in ADHD and is an excellent marker to monitor TMS-intervention effects—because TMS protocols must be optimized in order to ameliorate behavioural symptoms.

S2-01-S

Progress in understanding and treatment of ADHD—a neurobiological perspective

Rothenberger, Aribert¹; Steinhausen, Hans-Christoph²

¹University of Goettingen, Child and Adolescent Psychiatry, Germany; ²University of Aalborg, Child and Adolescent Psychiatry, Denmark

Overview: Neurobiological research in ADHD is rapidly and successfully progressing. It seems important to provide a perspective which tries to check the practical value of the obtained results, especially related to improvement of understanding, psychoeducation and treatment of ADHD. The three presentations of this symposium allow to give new insights into the pathophysiology of ADHD (here: genetics, neurochemistry and neurophysiology) as well as possible new treatment approaches (here: neurotherapeutics via electrical brain stimulation and serotonergic modulation of emotions and cognition). Hence, the symposium will present empirical evidence which may be relevant for future clinical use.

S2-02-1

Effects of parents' prenatal attachment, marital satisfaction and parent's anxiety on the quality of triadic interaction with 18 months old child

Korja, Riikka¹; Räähä, Hannele²; Tammisto, Riia³; Ahlqvist-Björkroth, Sari²; Aromaa, Minna⁴; Savonlahti, Elina⁵; Junttila, Niina⁶; Piha, Jorma⁵; Steps-, Study Group⁷

¹University of Turku and Turku University Hospital, Div. of Psychology and Dpt of Child Psychiatry, Finland; ²University of Turku, Division of Psychology, Finland; ³University of Turku and Turku University Hospital, Division of Psychology and Dpt of Child Psychiatry, Finland; ⁴University of Turku, Department of Public Health, Finland; ⁵University of Turku and Turku University Hospital, Department of Child Psychiatry, Finland; ⁶University of Turku, Div. of Psychology and Centre for Learning Research, Finland; ⁷University of Turku, Finland

Background: Parental attachment representations of their child guide parental interaction behavior in caregiving relationships. They begin to form during pregnancy and are quite stable after infant's birth. The associations between parents' prenatal attachment working models and infant's attachment style are widely studied. More studies are needed about the relations between prenatal attachment and family triadic interaction. Especially, there is need for the studies about the role of father's prenatal attachment in the development of family interaction.

Aim of the study: This study describes how mother's and father's prenatal attachment representations of their child are associated with the quality of triadic interaction between the 18 months old child and

its mother and father. Furthermore, the aim is to evaluate how prenatal marital satisfaction and parent's prenatal anxiety is related to the quality of triadic interaction when the child is 18 months old.

Study subjects and methods: The study groups include 70 families with low and 76 families with high marital satisfaction during pregnancy. Marital satisfaction is assessed using Dyadic Adjustment Scale (DAS) at 20th gestational weeks. Mother's and father's prenatal representations of their child are assessed using Working Model of Child Interview (WMCi) during the period of 28–32 gestational weeks. The triadic family interaction is assessed in a Lausanne Trilogue Play (LTP) setting using a Family Alliance Assessment Scale (FAAS) at 18 months of child's age.

Results: Preliminary results showed that mother's prenatal attachment representations were related to the family alliance when the child was 18 month old. However, father's prenatal attachment representations were not related to the family alliance. The final results and the associations between prenatal marital satisfaction, parental anxiety and family alliance will be presented in the symposium.

S2-02-2

Risk and protective factors in the development of mother–father–child interactions from pregnancy to the preschool age

Simonelli, Alessandra; Petech, Erika; Bighin, Mara; De Palo, F.

University of Padova, Department of Developmental and Social Psychology, Italy

Background: Authors highlighted the need to take into account the role of risk and protective factors for the family development when considering non-referred populations (Sameroff, McDonough, and Rosenblum, 2003). Within a systemic perspective it is relevant to identify if there are factors that can influence the development of the child and the family interactive context addressing them towards adaptive or dysfunctional directions in the medium/long term.

Aims: The research analyzed the development of mother-father-child interactions from pregnancy to the preschool age and identified the role of individual factors (attachment history, postnatal depression) and contextual sources of stress and support (coparental and marital relationship, father involvement) for the child and family development.

Materials and methods: 70 families were seen prenatally (7th month of pregnancy) and postnatally (4, 9, 12 months and 4th year of the child). Observational measures (Pre- and Post-natal Lausanne Trilogue Play, Fivaz-Depeursinge, and Corboz-Warnery, 1999), questionnaires (DAS, Spanier, 1976; Questionnaire on Father Involvement, Frascarolo, 1994; EPDS, Cox et al., 1987; Symptom Checklist derived from Robert-Tissot et al., 1989) and an interview (AAI; George et al., 1985) were used.

Results: The quality of mother-father-child interactions improves during the first year and is positively related to the degree of father involvement over time. Marital adjustment is not associated to the quality of family interactions whereas it shows a decrease during the transition to parenthood and a negative relation with children difficulties at the preschool age.

Conclusions: The development of triadic interactions seems to follow a trend of improvement during the first year of the child with a subsequent consolidation by the preschool age and to be favored over time by the degree of paternal involvement thus highlighting the increasing and positive role of the father in the modern family.

S2-02-3

Development of the family alliance in in vitro fertilization families

Darwiche, Joëlle¹; Cairo, Sarah¹; Favez, Nicolas²; Germond, Marc³; De Roten, Yves⁴; Despland, Jean-Nicolas¹; Guex, Patrice⁵

¹University of Lausanne, Institut Universitaire de Psychothérapie, Switzerland; ²University of Geneva, Switzerland; ³FABER, Lausanne, Switzerland; ⁴University of Lausanne, Institut Universitaire de Psychothérapie, Switzerland; ⁵University of Lausanne, Switzerland

Background: Couples who conceive through In Vitro fertilization (IVF) have to realize the “traditional” transition from couple to family and, in addition, the transition from infertility to medically assisted fertility. Does it make a difference in the quality of their family interactions before and after birth? Previous results showed a stability (Favez et al., 2006) or a positive evolution (Bighin, 2009) of the family alliance before and after birth in non-referred families.

Aims: Our first aim was to investigate the pre-postnatal evolution of the family alliance, the marital satisfaction and the parent-to-infant attachment in IVF couples. The second aim was to explore if the prenatal coparenting alliance, the marital satisfaction and the parent-to-fetus attachment were predictors of the postnatal family alliance.

Materials and methods: Thirty-one couples expecting their first child were seen at the 5th month of pregnancy and when the child was 9 months old. Couple and family interactions were recorded in prenatal and postnatal versions of the Lausanne Trilogue Play (Fivaz-Depeursinge and Corboz-Warnery, 1999). Measures of marital satisfaction (Spanier, 1976) and parent-to-fetus/infant attachment (Condon, 1993) were used to document the family relational dynamic.

Results: Results showed that scores of IVF couples are similar or higher than reference norms for prenatal coparenting alliance, prenatal marital satisfaction and attachment to the fetus, but lower than in non-referred families for the postnatal family alliance. Results indicated a correlation between the pre- and postnatal assessments of marital satisfaction and parent-to-infant attachment but not for the family alliance. A multiple linear regression demonstrated that family postnatal alliance could be negatively predicted by the quality of the paternal attachment to fetus.

Conclusions: Possible implications of child-at-center co-parenting in explaining lower family alliance is discussed.

S2-02-4

Homoparental family and its triadic interactions. An exploratory research with the Lausanne Trilogue Play

DAmore, Salvatore; Scarciotta, Lidia; Miscioscia, Marina

University of Liege, Belgium

Various authors like Patterson and Chan (1995) suggest that the psychological evolution of a child who grew up in a homoparental family is not different from that of a child pertaining to other types of family structures.

Literature on family dynamics in homoparental contexts (Vecho and Schneider, 2005; Gross, 2005) shows that only few studies focus

on a systematic analysis of interactions. They rather deal with representational and symbolic aspects within the parents-children dyad and use various methodological modalities, the analysis unit being the single person.

For this reason it is actually essential to try to understand the child’s development from a triadic point of view that takes into consideration the parental couple and the child (Fivaz-Depeursinge, 2003).

The aim of our study is to observe the postnatal family interactions of homoparental families using the Lausanne Trilogue Play paradigm (LTP Fivaz-Depeursinge, 1999). We assume that there are no significant differences regarding the quality of the family triadic interactions. Family alliance appears to be comparable in homoparental and other non-referred family samples.

The first results with 15 homoparental families seem to confirm our research hypothesis. These pilot results may turn out to be significant in our ongoing research.

S2-02-S

Assessment of early family triadic interactions

Darwiche, Joëlle

University of Lausanne, Institut Universitaire de Psychothérapie, Switzerland

Studies showed that well coordinated family interactions tend to foster the child’s socio-emotional development whereas poorly coordinated family interactions may impede it (McHale, 2007). The goal of this symposium is to present results from different studies which used the same observational paradigm to assess family interactions: the “Lausanne Trilogue Play” (LTP, Fivaz-Depeursinge and Corboz-Warnery, 1999). The studies’ results concern the associations between the quality of the family interactions and several parent’s and/or child’s outcomes. Different types of families were studied: non-referred, In Vitro Fertilization and homoparental families:

1. **Riikka Korja** will present results showing that the mother’s prenatal attachment representations are related to the quality of the family triadic interactions (Title: *Effects of parents’ prenatal attachment representations, marital satisfaction and parent’s anxiety on the quality of triadic interaction with 18 months old child*).
2. **Aless and ra Simonelli** will present results indicating that the quality of the family triadic interactions improves during the first year and is positively related to the father’s involvement (Title: *Risk and protective factors in the development of mother-father-child interactions from pregnancy to the preschool age*).
3. **Joëlle Darwiche** will present results showing that In Vitro Fertilization families have a high level of prenatal functioning but a decrease of the quality of family interactions after birth (Title: *Development of the family alliance in In Vitro Fertilization families*).
4. Finally, **Salvatore DAmore** and **Marina Miscioscia** will present results showing that the quality of the triadic interactions in homoparental families is comparable to those in other non-referred family samples (Title: *Homoparental family and its triadic interactions. An exploratory research with the Lausanne Trilogue Play*).

Jari Sinkkonen will be the discussant of this symposium.

S2-03-1**Intersex—ambiguous genitals or ambiguous medicine?***Venhola, Mika*

Oulu University Hospital, Pediatrics, Finland

Intersex is a congenital atypical combination of physical features that are used to distinguish the binary female and male sex. Intersex is a normal yet rare form of human biology and cannot be considered as an illness.

An intersex condition can be noted in a newborn due to ambiguous genitalia but sometimes it is found out later in life. The hormonal status, anatomy, karyotype and physical well-being of intersex infant are investigated by a team of pediatric endocrinologists, geneticists and surgeons. They are usually faced with the dilemma that these biological markers of sex do not give a uniform answer to identify the infant's gender. So the gender of the child is an educated guess and entails a great risk of error.

The atypical genitals of babies with intersex conditions are not a health risk but genital surgery is performed for aesthetic or social purposes. Genital surgery seeks to produce genitals that match the supposed gender of the infant. The advocates of surgery consider this mandatory but controversy exists. Some authorities consider cosmetic surgery on babies as genital mutilation. There are no controlled studies of the efficacy of surgery over conservative and supportive care to enable good sexual function, quality of life and parental bonding. The techniques of surgery are infested with poor long-time results and redo surgery is very likely.

Intersex genital surgery is not without problems. The management of intersex conditions is based on expert opinion and evidence on proper treatment is lacking. Intersex is also an ethical problem as full disclosure, informed consent and children's rights are not unquestionably respected. The treatment paradigm of intersex conditions is debatable and clinicians are in confusion as to the best management of intersex. The presentation discusses the clinical, ethical and psychological problems involved in the management of intersex babies and children and suggestions to overcome these difficulties are given.

S2-03-2**Childhood gender identity as a developmental problem: the inter-relationship of child and adolescent psychiatry, endocrinology and the law***Campbell, Paul*

Royal Children's Hospital Melbourne, Mental Health Service, Australia

Growing up with psychological gender identity at variance with one's own biological gender can be an extremely distressing and disruptive process. Gender Identity Disorders so-called are poorly understood conditions. Whilst many families are able to be supportive and understanding of their distressed child, others struggle to understand and accept their child's gender variance. For some children moving through puberty and adolescence can be a period of frightening upheaval. There have been major advances in approaches to treatment for children and young adolescents in recent years which have involved developments in systemic psychotherapeutic, family and endocrinological interventions. There is now a consensus statement regarding the role of puberty suppression and other

hormone treatments for adolescents with a diagnosed gender identity disorder. A state-wide collaboration of clinicians in Melbourne have provided assessment and treatment for over 25 young children and adolescents. Brief clinical vignettes will be presented to illustrate some of the dilemmas confronting young children experiencing intense confusion about gender identity. For some young children puberty suppressing medication (GnRH analogue treatment) is indicated. This presents a number of clinical and ethical dilemmas. In Australia, hormone treatment for children with gender identity disorder before the age of 18 years requires the approval of the Family Court of Australia. Child and adolescent mental health professionals have the difficult task of providing a thoughtful and comprehensive assessment of the child and family in order to develop an appropriate treatment plan which is in the child's best short and long-term interests. This involves addressing both children's rights and issues of capacity to consent to treatment and understand the long-term implications.

S2-03-3**Gender differences in parental images and intimate relationships satisfaction***Kiviniemi, Annukka¹; Wasz-Höckert, Ole²; Seitamo, Leila²; Joskitt, Leena¹; Heikkinen, Hanna³; Moilanen, Irma¹; Ebeling, Hanna¹*

¹Institute of Clinical Medicine, University and University Hospital of Oulu, Department of Child Psychiatry, Finland; ²Institute of Clinical Medicine, University of Oulu, Department of Child Psychiatry, Finland; ³IT Administration Services University of Oulu, Department of Mathematical Sciences, Finland

Background: Earlier studies suggest that positive images of parents associate with a loving and balanced intimate relationship, while a quarrelsome and repressive relationship relate with negative images of parents. Males and females are expected to react partly differently to growth environment and possibly developed gender specific parental images and associations with these images.

Aims: The aim of this study was to find out the differential association between images of the mother and father and the psychosocial well-being of young adults from the perspective of satisfaction in intimate relationships between females and males.

Material and methods: The research is a part of the Oulu University Hospital "Mother-Child Follow-up Study 1971–1972", and the follow-up data in 2000 was collected from the young adults (N = 145 males, N = 192 females) by mailed questionnaires including 17 questions about their images of their parents and 18 questions about their intimate relationship satisfaction. In this study the attachment theory was used as a theoretical frame of reference.

Results: Positive mental images of both parents were related in females' balanced intimate relationship. Paternal sociability and supportiveness protected females from a quarrelsome and repressive/submissive relationship. Paternal domination exposed both females and males to a repressive/submissive relationship, but associated only with male's quarrelsome and less balanced relationship, whereas maternal supportiveness and diligence associated with males' loving, balanced and less quarrelsome relationship.

Conclusion: Mental images of one's own parents associated with intimate relationship satisfaction in both genders. In particular, the positive images of the father seem to associate with females' intimate relationship satisfaction, while for males the positive images of the mother seem to be important in this respect.

S2-03-4 Experiences from meeting with and supporting children, youth and their parents when transsexualism could be the case

Rydellius, Per-Anders

Karolinska Institutet, Women's and Children's health, Sweden

From 1985 we have had a cooperation between Child and Adolescent Psychiatry, Pediatric Endocrinology, Psychology, Gynecology and Plastic Surgery to help newborn children with DSD, Developmental Sexual Disorders. The majority has been biological boys, XY, with different degrees of androgen insensitivity. Some of them have developed to young women while others have had a male development. In 4 cases with CAIS, Complete Androgen Insensitivity Syndrome, biological boys have developed to fully normal women, seeking help puberty when they do not have breasts and menarche. 10 years ago a new group of patients boys and girls turned to us with the desires to belong to the opposite gender/sex. Probably Internet played a role in this. Until now, we have met with 34 girls wanting to be boys and 21 boys wanting to be girls. They are coming from all over Sweden and are all assessed in a multidisciplinary way (Child and Adolescent Psychiatry, Pediatric Endocrinology, Psychology, Gynecology, Plastic Surgery and Speech Therapy). Their ages at referral have ranged from 6 years to 18 years of age, the majority 15–16 years at first visit. After an initial assessment, the decision is taken whether to stop the unwanted puberty and to go on with a “Real-life-test”, usually 2 years of length. During this period a new decision is taken to introduce sex hormones for the opposite sex, for girls mastectomy is performed, and around the age of 18 years the can seek legal permission to have a new sex/identify and operation is performed. The idea behind this is to give them as a normal adolescence as possible. Until now, 6 boys and 2 girls have undergone surgical treatment, usually within 6 months after their 18 anniversary. Another 5 girls are waiting for legal permission. When the children are less than 10 years of age, the family and the child is supported but no other actions is taken. Until now and in 5 cases the Real life Test has shown that Transsexualism is not the case.

S2-03-6 Processing gender identity—the healing power of empowering photography

Venhola, Mika¹; Savolainen, Miina²

¹Oulu University Hospital, Pediatrics, Finland; ²Aalto University, Finland

Empowering photography is a therapeutical method but not an actual phototherapy technique. Empowering photography it is always supportive. The main point is to make one's capacity visible using photographs. Used on the right way this flexible method can achieve promising results among people, who are not easily reached by methods based on verbal communication. The therapeutical power of photography is based on its bodily probative force.

Transgendered and intersexed persons can experience gender dysphoria. Many cultures disapprove of cross-gender behavior and transgender identity often results in problems for transgendered persons and those in close relationships with them. Transgender issues

are new in the scientific field and people seeking help for problems often end up educating the professional rather than receiving help. Some transgender people accept or embrace their transgender feelings, while others struggle with feelings of shame or confusion, stigma, discrimination and internal conflict. Discrimination, lack of social support, and inadequate access to care can exacerbate the problems transgendered people face. Transgender is not an illness, a mental disorder, or an emotional problem but the social stigma associated with being transgender is great and few individuals will tell anyone about their gender identity in childhood or adolescence. After years of secrecy transgendered people can have serious self-image and self-esteem problems.

We present a collaborative working process of exploring the diversity of sex and gender identity using empowering photography. The members of our group are Finnish intersexed or transgendered adults. Art- and social educator Miina Savolainen and Pediatric surgeon Mika Venhola tutor the process of the group.

S2-04-1 Validation of the Finnish Autism Spectrum Screening Questionnaire (ASSQ) in a community-based study

Mattila, Marja-Leena¹; Jussila, Katja¹; Linna, Sirkka-Liisa²; Kielinen, Marko³; Ebeling, Hanna¹; Kuusikko-Gauffin, Sanna¹; Joskitt, Leena¹; Hurtig, Tuula¹; Bloigu, Risto⁴; Moilanen, Irma¹

¹University and University Hospital of Oulu, Department of Child Psychiatry, Finland; ²University and University Hospital of Oulu, Finland; ³University of Oulu, Department of Educational Sciences and Teacher Edu, Finland; ⁴University of Oulu, Medical Faculty, Finland

Background: Diagnosis in autism spectrum disorders (ASDs) is a time-consuming and a highly specialized task. Parents have been found to be more satisfied with the diagnostic process when they see fewer professionals and when children are diagnosed at younger ages. An increasing number of screening instruments have been developed to make it easier to recognize subjects who may have ASDs. The Autism Spectrum Screening Questionnaire (ASSQ) was originally designed in Swedish, initially known as the Asperger Syndrome and high-functioning autism Screening Questionnaire, and has been translated into Finnish.

Aims: To assess the validity and to establish cut-off scores of the Finnish ASSQ.

Materials and methods: In a community-based study of 8-year-old children in the Northern Ostrobothnia Hospital District, Finland, 4,422 children were rated via ASSQ by parents and/or teachers; 110 were examined using structured interview, semi-structured observation, IQ measurement, school-day observation, and patient records. DSM-IV-TR criteria in detail were used to construct clinical consensus diagnoses of ASDs, based on all gathered information.

Results and conclusions: In the Finnish ASSQ, a cut-off score of 30 for parents' plus teacher's summed scores with 89% sensitivity, 82% specificity, 62% positive predictive value (PPV) and 96% negative predictive value (NPV) best distinguished the subjects with ASDs from those without. Single ratings by teachers can be used, but they are no longer recommended. Single ratings by parents are clearly not to be used. The validity findings can be adapted for primary school-aged 7- to 12-year-old children with normal intelligence or mild mental retardation. Clinicians are reminded that the ASSQ is a screening instrument, not a diagnostic instrument, as the low PPV showed. Evaluation and validation of imported and translated screening instruments are of utmost importance.

S2-04-2

The Autism Spectrum Screening Questionnaire—Revised Extended Version (ASSQ-REV): an instrument for better capturing the autism phenotype in girls?

Kopp, Svenny¹; Gillberg, Christopher²

¹Queen Silvia Children's Hospital, Child Neuropsychiatry, Sweden;

²Sahlgrenska Academy, Gillberg Neuropsychiatry Centre, Sweden

We wanted to develop and validate an extension of the Autism Spectrum Screening Questionnaire (ASSQ)—the ASSQ Revised Extended Version (ASSQ-REV)—for better capturing the female phenotype of autism spectrum disorders (ASD). Clinic girls and Clinic boys, most of whom with ASD and/or attention-deficit/hyperactivity disorder (ADHD), and Community girls without a clinical diagnosis of any kind of neuropsychiatric disorder were compared on the results of the parent-rated ASSQ and on a new set of items (ASSQ-GIRL). The ASSQ-REV discriminated well between cases and non-cases. Certain single ASSQ-GIRL items were much more typical of girls than of boys with ASD. The most striking of these were “avoids demands”, “very determined”, “careless with physical appearance and dress” and “interacts mostly with younger children”. The issue of whether or not there is a gender-specific ASD phenotype ASD is discussed.

S2-04-3

Autistic traits and overall functioning

Jussila, Katja¹; Ebeling, Hanna¹; Mattila, Marja-Leena¹; Kuusikko-Gauffin, Sanna¹; Hurtig, Tuula²; Moilanen, Irma¹; Pauls, David³

¹Institute of Clinical Medicine, University and University Hospital of Oulu, Finland, Department of Child Psychiatry, Finland; ²Institute of Clinical Medicine, University and University Hospital of Oulu, Finland, Institute of Health Sciences, University, Finland; ³Psychiatric and Neurodevelopmental Genetics Unit, Center for Human Genetic Research, Harvard Medical School, Massachusetts General, USA

Background: It has been suggested that children with ASD exhibit moderate correlations with psychopathology. The literature indicates also that individuals with intellectual disability demonstrate high levels of psychopathology. The overall functioning and competence related to the severity of ASD traits is an understudied area though it may provide useful information for treatment options.

Aims: To study the association between autistic traits, competences and psychiatric problems of high-functioning children with ASD.

Methods: Parental assessments of the Social Responsiveness Scale (SRS) and the Child Behavior Checklist (CBCL) of 53 high functioning children with ASD were gathered. The mean age of the study group was 11.6 years.

Results: The SRS scores were significantly correlated with the CBCL total problems ($\rho = .48$), withdrawn ($\rho = .28$), social problems ($\rho = .38$), thought problems ($\rho = .64$), attention problems ($\rho = .41$), delinquent behavior ($\rho = .27$) and aggressive behavior subscales ($\rho = .31$), but not with the CBCL competence scales.

Conclusions: Comorbid psychopathology among high-functioning children with ASD may be related to the severity of autistic traits; our

results indicate that those with severe impairment in reciprocal social behavior manifest various kinds of psychiatric symptoms. High SRS scores were not indicative of poor competence among these high functioning children.

S2-04-4

Development and living situation of children with Asperger syndrome or high-functioning autism

Hurtig, Tuula; Moilanen, Irma; Ebeling, Hanna; Joskitt, Leena; Mattila, Marja-Leena

University and University Hospital of Oulu, Department of Child Psychiatry, Finland

Background: Clinical studies related to Autism Spectrum Disorders (ASDs) in children are increasing. In the population level, however, little is known about the development and early psychosocial well-being of children with ASDs.

Aims: To study the development and well-being of children with Asperger syndrome (AS) or high-functioning autism (HFA).

Methods: In 2000–2003 a large community-based sample of eight-year-old children were collected in the Northern Ostrobothnia Hospital District, Finland, including over 4,000 children. Parents and teachers of children completed the Autism Spectrum Screening Questionnaire (ASSQ) and parents provided information of their child's development and family environment. After careful diagnostic investigations 24 of children were diagnosed as having AS or HFA. They were compared to the rest of the sample by using cross-tabulation with Chi-squared testing.

Results: There were no differences in pregnancy or birth complications, Apgar scores or infant health between the study groups. The AS/HFA group manifested learning difficulties (31.8 vs. 6.1%, $p < .001$) more often than other children. According to parents (62.5 vs. 9.6%, $p < .001$) and teachers (58.3 vs. 4.1%, $p < .001$), children with AS/HFA were been teased or bullied in school more often than other children. Parents of AS/HFA children reported more often than other parents of a close relative with AS (6.3 vs. 0.7%, $p < .001$) or autism (13.3 vs. 1.9%, $p .034$). All children in the AS/HFA group lived in intact families, while the corresponding percentage in other families was 84.2. Parents of AS/HFA children were well educated, especially fathers had a university level master's or doctoral degree more often than fathers of other children (26.7 vs. 13.1%, $p .033$).

Conclusions: Eight-year-old children with AS/HFA seem to have academic and social problems. These problems may pose a risk for later coping. However, family environment of these children could act as a protective factor.

S2-04-5

Multicultural issues in child and adolescent psychiatry in Ireland

McNicholas, Fiona

Lucena Clinic, St. John of Gods, Our Lady's Sick Children Hospital, Crumlin and University College Dublin, Dublin, Ireland, Ireland

Objective: In recent years, Ireland has changed from being a country of emigration to a country of immigration. The objective of this symposium is to highlight the difficulties faced by these immigrants to Ireland, the majority of whom are young males.

Methods: This presenter will review available data on Irish population and service based studies in relation to transcultural mental health difficulties.

Result: Immigrant children in Ireland represent a diverse group with different reasons for immigration and different psychological, cultural, social and legal status from each other and from non-immigrant children. The Irish Health Behaviour in School-aged Children (10–17, N = 10,334) found they accounted for 5.4% of the sample of which 276 were from the UK and 286 from other countries. The percentage of immigrants reporting high life satisfaction compared to the matched group was lower (74 and 80% respectively; $p < 0.05$), especially among boys (75% of immigrant boys compared to 83% of matched group; $p < 0.05$). Immigrant boys (except those who were born in UK and later migrated to Ireland) were less likely to be involved in most risk taking behaviors compared to their matched group. Many African/Irish children are singled out and made feel different to majority white Irish society. A service-based study indicated that more non-Irish than Irish children were diagnosed with Axis-I diagnosis (66.7 vs. 53.4%; $p < 0.05$), most commonly PDD which was present in almost a quarter (24%) of immigrant children attending CAMHS.

Conclusion: Immigration has posed significant challenges for Irish child and adolescent mental health services, social services and schools who have little prior experience of dealing with cultural and linguistic diversity. Specific attention should be paid to the cultural dimensions of mental disorders, especially in adolescents and children. This submission is a part of workshop Transcultural issues in child and adolescent psychiatry: evidence and practice

S2-04-S

Symptoms and everyday life in children and adolescents with Autism Spectrum Disorder

Pauls, David

Massachusetts General Hospital, Harvard Medical School, Psychiatric and Neurodevelopmental Genetics, USA

This symposium, is made up of four individual presentations from Finland and Sweden: (1) Validation of the Finnish Autism Spectrum Screening Questionnaire (ASSQ) in a Community-Based Study by Marja-Leena Mattila et al, (2) The Autism Spectrum Screening Questionnaire (ASSQ)—Revised Extended Version (ASSQ-REV): an instrument for better capturing the autism phenotype in girls? by Svenny Kopp and Christopher Gillberg, (3) Autistic Traits and Overall Functioning in ASD by Katja Jussila et al, and (4) Development and Living Situation of Children with Asperger Syndrome or High Functioning Autism by Tuula Hurtig et al The Autism Spectrum Screening Questionnaire (ASSQ) was originally developed in Sweden, and first we hear about the validation process, and get recommendations for using it in Finland. The second speech will further present a Swedish revised version of ASSQ for screening girls with ASD. The third presentation concentrates on connections between Social Responsiveness Scale (SRS) and Children's Behaviour Checklist (CBCL) in high functioning children and adolescents with ASD, in order to study associations between autistic traits, competences and psychiatric problems. The fourth presentation compares the development and living situation of children with ASD and typically developed children in a large community-based sample of 8-year old children.

S2-05-1

Development of specialised Psychiatric Services for Adolescents in Finland

Laukkanen, Eila¹; Pykkänen, Kari²

¹University Hospitals of Kuopio and University of Eastern Finland, Department of Adolescent Psychiatry, Finland; ²The Finnish Association of Adolescent Psychiatry, Finland

The developmental needs and challenges in adolescence are different from those of childhood. Evidence has shown that the solutions to these challenges are important for mental health in adulthood. This must be taken in consideration when targeting mental health services for adolescents. Prevalence of mental disorders among adolescents is over 20%.

Finland was the first European country, which created a system of focused mental health services for adolescents. A special Task Force drafted the strategy for independent, full medical speciality of adolescent psychiatry in 1987. The services are targeted for 13–22 year olds—12% of the population. The resources for the new service were allocated from former mental hospitals, which were run down. Follow-ups of the provision and use of the new services were carried out in 2002, 2007 and 2010 by the Association of Adolescent Psychiatry.

The aim of the service is promotion of healthy development by early intervention whenever there are signs of stagnation in the adolescent developmental process. Easy access is promoted by special Walk-in Centres. Specialised out- and inpatient services extend throughout the country. The follow-up data show that there has been an enormous hidden need of adolescents to consult reliable and interested mental health professionals. The need has changed to demand. The number of youths visiting the Adolescent Clinics has multiplied during the last 15 years. In urban areas 4–6% of adolescents consult the Adolescent Clinic annually.

Also research about adolescents' development and disorders has increased. The challenges in future are collaboration between primary and secondary care and simultaneously development of psychotherapeutic treatments alongside biological treatment methods. The presentation describes this 30 years long developmental process and its results.

S2-05-2

Self-reported symptoms in adolescence predicting hospital-treated mental disorders

Mäki, Pirjo¹; Miettunen, Jouko²; Moilanen, Irma³; Kaakinen, Marika⁴; Taanila, Anja⁵; Murray, Graham⁶; Joukamaa, Matti⁷; Veijola, Juha¹

¹University of Oulu and Oulu University Hospital, Department of Psychiatry, Finland; ²University of Oulu, Department of Psychiatry, Finland; ³University of Oulu, Clinic of Child Psychiatry, Finland; ⁴University of Oulu, Institute of Health Sciences, Finland; ⁵University of Oulu and Oulu University Hospital, Institute of Health Sciences, Finland; ⁶University of Cambridge, Department of Psychiatry, UK; ⁷University of Tampere, Tampere School of Public Health, Finland

For pre-arranged symposium: "From Research to Practice: Finnish Adolescent Psychiatry Today"

Background: The onset for many severe psychiatric disorders is in adolescence.

Aim: We wanted to study which kind of self-reported symptoms precede onset for hospital-treated mental disorders in youth.

Material and methods: Members (N = 6,676) of the Northern Finland 1986 Birth Cohort, an unselected general population based cohort, were examined in adolescence. The 16-year field study had several self-reported questionnaires including Youth Self-Report (YSR) and a 21-item PROD-screen questionnaire screening prodromal symptoms for last 6 months. The prodromal symptoms were classified as positive, negative and general. The Finnish Hospital Discharge Register was used to find out new cases of severe mental disorders till the age of 23 years.

Results: During the follow-up, 0.6% of the cohort members were submitted to hospital due to first episode psychoses. Of the subjects, 2.2% had new hospital-treated non-psychotic disorders including severe affective and anxiety disorders and also substance use disorders. The prevalences of positive, negative and general symptoms in the PROD-screen were all highest in the group of adolescents who developed psychotic disorder, and lowest in the 'healthy'. Both positive ($p < 0.001$) and negative features ($p < 0.001$) predicted psychotic disorders. General symptoms predicted both new psychoses ($p < 0.001$) and non-psychotic disorders ($p < 0.001$) compared to the group without hospital admission. Self-harm or suicidal ideation screened by YSR was more commonly reported by subjects who later had psychosis ($p < 0.05$) or non-psychotic disorders ($p = 0.06$) than the group without hospital treated mental disorders.

Conclusions: Positive, negative and general symptoms reported by adolescents all predicted first episode psychoses; and so did self-harm or suicidal ideation. General symptoms were connected to the risk for subsequent non-psychotic disorders, too.

S2-05-3

From research to practice: Finnish adolescent psychiatry today, co-operation between child welfare and adolescent psychiatry

Haapasalo-Pesu, Kirsi-Maria

Satakunta Hospital District, Turku University, Finland

Over 16,000 children and adolescents were placed in substitute care outside their own homes in Finland in 2008. All young people placed in substitute care have their special needs: 50–83% of placed adolescents suffer from mental disorders, most common behavioral disorders. In Pori an adolescent psychiatric clinic was set up for those adolescents who were placed in substitute care in the Satakunta region. A team consisting of a doctor, two psychotherapists, a psychologist and a nurse, was appointed. The training of the personnel working at child welfare facilities focuses on social welfare, upbringing and counselling. However, psychiatric symptoms and medication with psycho-pharmaceuticals are part of the daily life in institutions. The children have emotional immaturity, their psychic and inner structures are not even developed, although this could be expected on the basis of their age. The adolescent outpatient clinic provides consultations for social services, including psychiatric evaluations in cases where substitute care is considered as an option. Mistaken placement decisions will be detrimental and lead to frequently changing locations of placement and thus endanger the child's developing attachment and entire development. Often nurture in the everyday life at the location of placement is the most important rehabilitating factor. Actual psychiatric treatment and rehabilitation focus directly on the child, or then on the family, substitute family or institution. The treatment might focus indirectly via consultations and supervision of work. It is important that the workers of psychiatric

care and social services work together-solutions often include network consultations, treatment plans and guardianship. It would sometimes be easiest if all parties were present simultaneously.

S2-05-4

Legal regulation of adolescent mental health care in Finland

Kaltiala-Heino, Riittakerttu

University of Tampere, Medical School, Finland

The Mental Health Act stipulates in Finland that the responsibility to provide appropriate mental health services in on the municipalities. Hospital districts that are coalitions of municipalities provide specialist level psychiatric services, financed by taxation. The Mental Health Act defines that adolescents have to be treated separate from adults, guaranteeing thus specific adolescent psychiatric wards in all hospital districts. Involuntary commitment criteria for minors differ from those for adults, focusing on guaranteeing the right to receive care in broader conditions that are allowed concerning adults. In line with child welfare legislation, the minors' right for special protection due to their developmental needs is seen primarily fulfilled in ensuring medical treatment rather than in ensuring maximum self-determination. Adolescents are, however, increasingly guaranteed rights to be heard and to participate in decision-making concerning their own health and welfare. In the Act on Status and Rights of a Patient this right is tied to the adolescent's developmental level rather than to specific age. Right to receive psychotherapy funded by National Health Insurance was recently strengthened by legislation.

S2-05-5

Adolescent psychiatry is developmental stage psychiatry

Aalberg, Veikko

Finnish Association of Adolescent Psychiatry, Finland

Adolescence is a bio-psychosocial process defined as a process of adaptation. The knowledge of normal development is the basis for understanding adolescence. The discussion of normal adolescence is necessary to understand psychopathology. Interest in normality is far overshadowed by interest in pathology, the latter seemingly more easily defined. In trying to help adolescents in distress, the causes of disturbance within the individual, family and society have to be understood if damage is to be repaired. As the bio-psychosocial determinants of emotional difficulties become clear it is slowly becoming more possible to diagnose the causes of such adolescent disturbances adequately. Most diagnostic labels applied to adolescent maladjustments are inadequate, they pick out symptom clusters and do not indicate separate developmental problems. The physical pubertal development initiates an adolescent psychosocial maturation. The timetable of physical and psychological development is different in boys and girls. It is a great challenge to the clinician to try to integrate the simultaneous physical, psychological and social changes in adolescence and to understand their influence on each other. Puberty is a critical period of development due to many physical changes. During this phase any adolescent is under stress and in a very sensitive phase of life. The developmental progress of adolescence is predicated on the capacity to regress. During no other phase do simultaneous forward and backward developments occur with rapid fluctuations between advancement and

regression. Regression is a necessary, even obligatory developmental event but it may also be a threat, for the development may slow down, become distorted, lead to development without a phase-specific regression or remain permanently regressed. Adolescence is marked by typical external and internal conflicts which promote progressive development or lead to psychopathology.

S2-05-S

From research to practice: Finnish adolescent psychiatry today

Lahti, Ilpo¹; Laukkanen, Eila²

¹Finnish Adolescent Psychiatric Association, Finland; ²University of Kuopio, Department of Adolescent Psychiatry, Finland

The basic background in developing Finnish adolescent psychiatry—which has a history of more than 30 years and which has been a full medical speciality over 10 years—has been the understanding of the psychodynamics of the adolescent development as a specific phase between childhood and adulthood. The research in this field and the development of specific psychiatric and psychotherapeutically oriented treatment methods have been very active. One of the main focuses has been to develop the best possible treatment chains from school health care through walk-in polyclinics to psychiatric outpatient care and wards for severely disturbed adolescents. Another focus has been to develop the co-operation between social services and adolescent psychiatric services. The symposium gives the opportunity of learning more of some ongoing research and treatment projects and also the historical background of Finnish adolescent psychiatry.

S2-06-1

How to help when silence is not golden? Treatment of 24 children with selective mutism—preliminary results

Oerbeck, Beate; Kristensen, Hanne

Center for Child and Adolescent Mental Health, Eastern and Southern Norway, Norway

Background: Children with selective mutism (SM) can talk but are characterized by a consistent lack of speech in important social situations. When they are mute, some do not communicate nonverbally and are unable to express their needs, emphasizing the seriousness of this condition. SM is considered to be hard to treat, and treatment studies are lacking. The authors have developed a multimodal treatment for SM, starting at home and continued in the child's kindergarten/school for a maximum of 6 months using predefined treatment goals in terms of speaking levels, from I (Speaks to the therapist in a separate room with a parent present) through to VI (Speaks in all kindergarten settings without the parent or the therapist present). Treatment outcome was favourable in a pilot efficacy study with preschool children (N = 7, age 3–5 years).

Aims: To investigate the effect of the same treatment in a larger sample of children with SM, including older children and the use of local therapists under supervision. Materials and methods 24 children with SM aged 3–5 years (N = 9) and 6–9 years (N = 15) were enrolled in a controlled treatment study. Half of the children received treatment for 3 months, and by the use of the Bergman Selective Mutism Questionnaires they were compared to the other half who

served as wait-list controls (Phase 1). The wait list controls then received the same treatment, and all 24 children were treated for a maximum of 6 months (Phase 2). Outcome measures at 6 months will be the obtained speaking level (I–VI) and the Bergman Selective Mutism Questionnaires.

Results: There was a small, but significant increase in speaking behaviour in children who received the active treatment for 3 months compared to wait-list controls (Phase 1). The 6 months results (Phase 2) are not yet analyzed but preliminary results will be presented at the conference.

Conclusion: The home- and kindergarten/school-based treatment appears to be promising.

S2-06-2

Temperament and 5HTTLPR in selective mutism

Kristensen, Hanne; Oerbeck, Beate

Center for Child and Adolescent Mental Health, Eastern and Southern Norway, Norway

Background: Selective mutism (SM) describes children who consistently do not speak in certain social situations while they talk freely in other situations. Knowledge is sparse both on etiology and effective interventions. SM is currently understood as an expression of social anxiety. SM has also been associated with the temperamental trait behavioral inhibition (BI). As yet, no study on SM has included a measurement of BI in the form of a questionnaire or examined the serotonin transporter gene (5HTTLPR).

Aim: To examine the temperament trait of behavioural inhibition (BI), speaking behaviour and HTTLPR genotype in children with SM and in their siblings.

Method: The sample consisted of referred children with SM, 3–9 years (n = 31) and their siblings without SM (n = 47). BI and speaking behaviour were assessed by mother report using the Behavioural Inhibition Questionnaire (BIQ) and the Selective Mutism Questionnaire (SMQ), respectively. Genomic DNA was extracted manually from buccal smears. The biallelic polymorphism (long and short allele) in the serotonin transporter gene, HTTLPR, were amplified using PCR with fluorescence labelled forward primers and run on an ABI 3730 analyzer to separate the alleles.

Results: Compared with the siblings, the children with SM were rated to be significantly more behaviourally inhibited and to display less speaking behaviour across situations. The HTTLPR data are going to be analyzed, and the results will be presented at the conference.

S2-06-3

The ties of silence: a pair of twins with selective mutism

Eskeland, Benedicte; Albrigtsen, Vårin

Haukeland University Hospital, Department of Child and Adolescent Psychiatry, Norway

Background: The therapeutic approaches for selective mutism (SM) in children have varied substantially depending on the theoretical understanding of the underlying psychopathology and the different professions involved in the treatment. The prevalence is low and thus sufficient RCTs are difficult to conduct in order to investigate the most efficient treatment. There is little research in this field investigating the perspectives of the patients themselves and their families.

Aim: The main purpose of the study was to investigate the beliefs of a twin pair with SM and their caretakers' about the condition and what helped them overcome it.

Material and method: A qualitative in-depth interview with the family of 14 year old twins with longstanding severe SM was undertaken 2 years after they had regained normal speech. The interview was recorded, transcribed and analysed phenomenologically.

Results: The twins believed that moving to another area of the country in their first year of school, with subsequent perceived bullying from peers due to their regional accent, was a direct reason for the onset of their muteness. However, since they talked to one-another they never thought of themselves as "non-speakers". In retrospect, the boys had clear opinions about what had helped them during treatment, at school and in leisure activities. Pharmacological treatment with fluoxetine, as well as the transfer to a school with an understanding attitude were perceived as turning points in the process towards normal functioning. The family perceived the interview as a meaningful method for a shared understanding of a dramatic period in their lives.

Conclusion: A qualitative interview with patients recovered from SM may give valuable information as to the understanding of the impairment and factors leading to improvement. This knowledge can be used to plan experimental single-case studies to further validate the efficiency of specific treatment methods.

S2-06-4

Group psycho-education and training programme for parents of children with selective mutism

Mc Nicholas, Fiona¹; Sharkey, Louise M²; MacEvilly, Deirdre²; Begley, Maire²

¹Lucena Clinic, Ireland; ²Luceana Clinic, Ireland

Background: Treatment of selective mutism (SM) has generally focussed on the child. This current programme and study evolved from our previously published group treatment for children with SM and their parents. This intervention was designed as an adjunct treatment for parents of children with SM.

Aims: 1. To determine the efficacy of a specific psycho-education group for parents of children with SM and compare this to treatment as usual. 2. To be informed of parental views on their experiences of having a child with SM.

Materials and methods: Following ethical approval, parents of children with a diagnosis of SM were recruited from CAMHS Teams throughout Ireland. The format for each group session varied according to the topic and was designed to address the learning styles of the participants. Each session included an ice-breaker activity, review of the previous session, parent's questions and discussion as well as a focus on the main topic. Main topics included general information on SM, communication, anxiety, parenting, school related difficulties and social skills.

Results: The final findings are not yet analyzed, but will be presented at the symposium. Preliminary results indicate that the training program had a positive impact on parents directly and indirectly on their child. All children were reported to have made progress with speaking since the programme initiation. The parents described an increased understanding of the condition following group attendance, but also that a conspiracy of silence still exists in relation to a selective mutism diagnosis and this can leave parents feeling isolated.

Conclusion: The provision of a parent focussed psychoeducational group was found to be effective and acceptable to parents of children

with SM and may provide a cost effective way of enhancing treatment for these vulnerable children. Larger scale studies are required to test this further.

S2-06-S

Selective mutism in children: Understanding and treatment

Oerbeck, Beate¹; Kristensen, Hanne¹; Eskeland, Benedicte²; Mc Nicholas, Fiona³

¹Center for Child and Adolescent Mental Health, Eastern and Sothern Norway, Norway; ²Haukeland University Hospital, Department of Child and Adolescent Psychiatry, Norway; ³Lucena Clinic Tallaght, Child and Adolescent Mental Health Service, Ireland

Background: Selective mutism (SM) describes children who consistently do not speak in certain social situations while they talk freely in other situations. Knowledge is sparse on etiology and effective interventions. SM is currently understood as an expression of social anxiety associated with the temperamental trait behavioural inhibition (BI). As yet, no study on SM has included a measurement of BI or an examination of the serotonin transporter gene (5HTTLPR). No RCT's are published.

Aims: To increase knowledge about SM by presenting one study on possible etiological factors and results from three intervention studies.

Materials and methods: "Temperament and 5HTTLPR in SM" is a case-control study comparing BI and 5HTTLPR variants in children with SM (n = 31) and siblings (n = 47). The first treatment study "How to help when silence is not golden" presents results from a manual based RCT study on (n = 24). The second study will present data from a psycho-educational group intervention in Ireland. Finally "The ties of silence: a pair of twins with selective mutism" is a study using a qualitative in-depth interview with a family of a successfully treated pair of 14 year old twins.

Results: Compared with siblings, children with SM were significantly more behaviourally inhibited. The HTTLPR data are not yet analyzed, but results will be presented at the conference. The RCT study showed a small but significant increase in speaking behaviour for treated children (3 months) compared to wait-list controls. The psycho-educational group study offers a new perspective on evaluating the effectiveness of parent training for SM, by providing a holistic view of participant insights and experience. Medication and transfer to a new school were perceived as turning points in the successful treatment of the twins with SM.

Conclusion: SM is associated with the temperamental trait behavioural inhibition. The treatment studies underline the need of heterogeneous approaches to SM.

S2-07-S

IACAPAP symposium

Harper, Gordon¹; Fung, Daniel²; Omigbodun, Olayinka³; Robertson, Brian⁴; Belfer, Myron⁵; Solantaus, Tytti⁶; Niemelä, Mika⁶; Sipilä, Marianne⁶

¹IACAPAP (International Association of Child and Adolescent Psychiatry and Allied Professions), USA; ²Institute for Mental Health, Singapore; ³University of Ibadan, Nigeria; ⁴University of Cape Town, South Africa; ⁵Harvard Medical School, USA; ⁶National Institute for Health and Welfare, Finland

Although child and adolescent psychiatry developed in clinical settings, the limitations of clinic-based services are increasingly recognized. Problems have been recognized in many countries, both highly developed and resource-poor. The problems include the large numbers of troubled children unreached by services that rely on highly-trained specialists, the disempowerment felt by many disadvantaged families seeking help on professionals' territory, and the fragmentation of services among health, mental health, education, and child welfare. Professionals, advocates, and parents have called for new models of care, including systems of care. This symposium describes innovative approaches that reach into the community. Dr Fung will report on the development in Singapore of a national population-based approach with a small number of trained professionals. Drs Omigbodun, Belfer, and Robertson will present the outcomes of two IACAPAP study groups in Africa and the partnership between the Royal College of Psychiatrists and the West African College of Physicians. Dr Harper will report on the systems of care movement in the United States. Drs Solantaus, Niemelä, and Sipilä will report on the Effective Child and Family Programme II in Finland. The gap between conventional child clinician skills and the skills needed in such programs will also be addressed.

S2-07-1

Developing an evidence based delivery system in child and adolescent mental health care in Singapore

Fung, Daniel

Institute of Mental Health, Singapore, Child and Adolescent Psychiatry, Singapore

REACH "Response, Early Intervention and Assessment in Community Mental Health for Students" was set up in 2007 as part of a National Mental Health Blueprint in Singapore. It was designed to minimize stigma associated with seeking mental health services, and families consider it an acceptable way to seek help when needed because their children are seen by professionals in the school settings rather than someone from the mental health centers. Families are not so open to having their child to see professionals from the mental health centres because of the stigma of seeing a psychologist or a psychiatrist and the fear of finding out the severity of their child's problems. Using the school counselor as the nexus for transmitting expertise, school teachers and staff are taught skills in identifying and managing problems early. At the same time, a network of family doctors and social services agencies within the school's vicinity are engaged in similar fashion forming a network of community support for students and their families. The REACH team, working closely with each school identifies youth at risk for behavioral and emotional disturbance including violence early and works to get these young people and their families into services before the emerging problems become severe. REACH also works to reduce school drop-out and partners with local Non Governmental Organizations (NGOs) that serve drop-outs to identify and respond to indicators of behavioral and emotional problems early. REACH provides training on mental health issues to NGOs on risk indicators and assists them in developing services for these youth. REACH uses a variety of tools and resources that were originally designed for use in tertiary child psychiatric settings and modified them to be used in the community. One of these examples will be described; a Social Problem-Solving Skills Training (SPSST) intervention programme developed for use with Asian aggressive children and youth.

S2-07-2

Partnerships for Child and Adolescent Mental Health (CAMH) Training: Impact of IACAPAP study groups on the African Continent

Omigbodun, Olayinka¹; Robertson, Brian²; Belfer, Myron³

¹College of Medicine, University of Ibadan and University College Hospital, Ibadan, Nigeria, Child and Adolescent Psychiatry, Nigeria; ²University of Cape Town, Department of Psychiatry and Mental Health, South Africa; ³Harvard Medical School and Children's Hospital Boston, USA

Background: The International Association for Child and Adolescent Psychiatry and Allied Professions (IACAPAP) has a mission to promote the study, prevention, treatment, care and rehabilitation of mental disorders and disabilities of children and adolescents. One way this is being fulfilled is through study groups, particularly in developing regions. Study groups have been conducted by local faculty in partnership with experts from better-resourced regions.

Aim: To describe the process involved and the content of the IACAPAP study groups held in Africa in 2007 and 2009 and to analyze the impact on CAMH.

Methods: Analysis of documents, reports, evaluations and correspondence from alumni and faculty.

Results: The aim of the study groups 'to promote the development of effective and sustainable Child and Adolescent Mental Health (CAMH) care in Africa' remained the same in both years. Specific objectives changed, based on the needs of the participants. In 2007, the focus was advanced training in leadership, strengthening personal commitment to work together to promote CAMH in Africa and enhancing collaborative links. The establishment of the African Association for CAMH followed the 2007 study group, helping to sustain collaborative links within the continent and with IACAPAP. The 2009 study group was able to build upon the foundation laid by the first one, especially as a substantial number of alumni returned. The objectives of the 2009 study group were strengthening the participants' clinical skills, and widening the scope of therapeutic interventions they are able to deploy. More than 80% of alumni are actively working in CAMH. Some have enrolled for advanced formal training in regions with facilities for such. Service development, research activities, more training programmes are reported throughout the region.

Conclusions: These two IACAPAP study groups have promoted the development of effective and sustainable CAMH care in Africa and the impact is still growing.

S2-07-3

Systems of care—the potential, and what it takes

Harper, Gordon

Harvard Medical School, USA

Background: The systems-of-care movement represents an innovative approach to service design, intended to change the focus of care from professionals to the families served. The systems-of-care principles are informing program innovation in the United States and elsewhere. But the connection of systems-of-care to conventional child mental health services, in particular the competencies required of trained professionals to work in such systems, remain unexplored.

Aim: To review and define what professionals must provide in innovative child services.

Method: Literature review and interviews with child mental professionals working in systems of care.

Results: Experience in systems of care will be described and the requisite skills, not conventionally taught, identified.

Conclusions: It is possible to identify and teach the skills necessary for child mental health professionals to function in systems of care.

S2-07-4

Developing multisectoral health, social and educational services: families with parental health issues, substance use and poverty in focus

Solantaus, Tytti; Niemelä, Mika; Sipilä, Marianne

National Institute for Health and Welfare, Child and Adolescent Mental Health, Finland

The paper presents the theoretical basis and practical design of the Effective Child and Family Program II in Finland, and discusses its implementation. The programme aims to build community based services across health, social and educational domains and to create respective municipal strategies and policies. It is argued that the division of the psychosocial services into health and social services is outdated due to latest knowledge on child development. Difficulties working across sectors are well known and do not get solved by simple networking. An infrastructure with a system of reporting, a budget and capacity building is needed, even abolishing some of the sectoral lines in longterm.

There are four strategic elements in our Program to produce the system change. The first is to select an issue, which is an important and urgent public health problem in the community and the solution of which demands and forces the intended change to happen. In this Program, children and families with parental mental health and substance use issues, unemployment and poverty provide such a focus as they challenge multiple sectors to act together. The second strategy is to create municipal strategies and infrastructures along with practical work with parents, children and families. The third element is to develop and use a method or methods which the families agree with and which take the work into the intended direction and produce the desired change in practice. The fourth element is joint training and supervision across sectoral, professional and hierarchical lines.

The Effective Child and Family Programme II is an enactment the governmental “Kaste” programme, the aim of which is to bring the services to children and the responsible adults into their own contexts—home, kindergarten, pre/school, leisure time environments—and build collaboration across sectors and hierarchical structures.

S2-08-1

A survey of child and adolescent forensic mental health services in Australia and New Zealand

Harden, Scott¹; Stathis, Stephen²

¹Child and Youth Forensic Outreach Service, Australia; ²Mental Health Tobacco and Other Drugs Service, Children’s Health Services, Australia

Child and adolescent forensic mental health is a relatively new subspecialty area and has been identified as such in the professional literature. Other authors have described difficulties in: training staff in this area; providing comprehensive child and youth forensic mental health services; progressing research and provision of academic positions. A number of practitioners in Australia and New Zealand have practised for some years in forensic child and adolescent psychiatry. In recent times there has been a significant effort to improve the knowledge and understanding across the various geographical jurisdictions in these countries via an e-mail list and an inaugural face-to-face meeting of child and adolescent forensic psychiatrists in October 2009 with nearly 40 attendees. A common theme arising in discussions was the extreme variability of child and youth forensic mental health services available to the population of Australia and New Zealand with no jurisdiction offering what would be regarded as comprehensive services in this area. We surveyed practising child and adolescent forensic psychiatrists in Australia and New Zealand and followed up with other sources of information to develop a database of currently available child and youth forensic mental health services across the various geographic areas of Australia and New Zealand (on a per capita basis). Our intention in this presentation is to describe these findings, compare them to services that we would regard as “gold standard” services in this field and describe mechanisms by which improvements in New Zealand and Australian services may occur.

S2-08-2

Breastfeeding and child’s later hostility in adulthood

Merjonen, Päivi¹; Jokela, Markus¹; Pulkki-Råback, Laura¹; Hintsanen, Mirka¹; Raitakari, Olli T.²; Viikari, Jorma²; Keltikangas-Järvinen, Liisa¹

¹University of Helsinki, IBS, Unit of Personality, Work and Health, Finland; ²University of Turku, Department of Clinical Physiology, Finland; ³University of Turku, Department of Medicine, Finland

Background: The wide-ranging and long-lasting health effects of breastfeeding in offspring’s somatic health have been widely recognized. Alongside somatic advantages to the child breastfeeding may also bring about psychological benefits.

Aim: We tested whether breastfeeding predicts the adult hostility of offspring.

Materials and methods: Present study covers 1917 Finnish boys and girls aged 3, 6, 9, 12, 15, and 18 years at the baseline in 1980 who were born full-term with birth weight 2500 g or higher. Information of breastfeeding was reported by parents in 1983 and hostility data were reported by participants 12, 17, 21 and 27 years after baseline when the offspring were 15–45 years old. Hostility was measured with Cynicism (MMPI), Distrustful attitudes (SCL-90R) and Anger (BDHI) scales.

Results: Breastfed participants had lower level of hostility in adulthood than their non-breastfed peers ($p < 0.05$). This association was observed in all 4 measurement times. Associations were independent of several child-, mother-, or family-related factors. The duration of breastfeeding was in curvilinear relation with child’s later hostility. Those who were breastfed 4–6 months had lowest hostility levels.

Conclusions: Breastfeeding may have long-lasting effects to child’s hostility over the life-span. Future studies replicating the present finding and revealing potential mechanisms, e.g. maternal behavior or hormonal pathways, are needed.

S2-08-3**Pregnancy in Adolescence: Always unwanted?***Meneses, Celise¹; Lopes, Claudia²; Magalhães, Vera²*¹UERJ-UNIGRANRIO, Brazil; ²UERJ, Brazil

Introduction: Studies conducted all over the world show that the rates of pregnancy in adolescence are increasing especially in the early adolescence (10–14 years of age). Although the majority of pregnancies in this period are not desired some studies suggest that an expressive number of them could be even wanted.

Aims: (1) Assess the prevalence of pregnancy willingness and possible associations with socioeconomic and demographic factors and social support network in a population of pregnant adolescents. (2) Verify if age should be an effect modifier in these associations.

Methods: Cross sectional study conducted with pregnant adolescents regularly attending two public maternity. A sample of 232 pregnant adolescents between 13 and 20 years of age (mean 17.3) completed a self-reported questionnaire to access socioeconomic and demographic data.

Results: Prevalence of pregnancy willingness was 46.2%. Final adjusted model showed that being married (PR = 1.80; CI 95% 1.27–2.56) and do not have friends (PR = 1.48; CI 95% 1.15–1.90) showed association with desire of being pregnant. Girls studying in the elementary grade and with 12–16 years of age showed less desire of being pregnant (PR = 0.57; IC 95% 0.38–0.88).

Conclusion: Pregnancy may not always be unwanted. Some factors, as being married and do not have friends may have influence in these cases. Professionals dealing with adolescents should be aware of these issues to identify risk situations that could be successfully managed.

S2-08-4**Does attachment security in adolescence have the power predict adjustment any better than parent–child relationship quality?***Scott, Stephen¹; O'Connor, Thomas²; Jackie, Briskman³*¹Kings College London, Institute of Psychiatry, UK; ²University of Rochester, USA; ³Kings College London, UK

Background: Attachment theory was conceptualized by Bowlby as relevant across the life-span, from “cradle to grave.” The research literature on attachment in infants and preschool-aged children is extensive, but is very limited in adolescence. In particular, it is unclear whether attachment security has distinct power to predict adjustment over and above the quality of the current parent-adolescent relationship, in which case attachment could be a redundant concept.

Methods: Data from three studies of adolescents, representing normal- to high-risk status, were combined, n = 248. Attachment was assessed using the Child Attachment Interview, a recently constructed measure designed for older children and adolescents. Parent–adolescent relationship quality was assessed in detail through questionnaires, interviews and observation of a standard “hot topic” problem-solving interaction. Adjustment was assessed through

parental psychiatric interview, teacher questionnaire and adolescent self-report.

Results: Correlation analyses showed that secure attachment representations were modestly associated with measures of the current parent–adolescent relationship such as monitoring, negative expressed emotion and directly observed parental warmth and anger. In addition, attachment representations were reliably associated with many key indicators of psychological adjustment in adolescence, including parent-rated oppositional-defiant disorder symptoms, teacher-reported emotional and behavioural difficulties and self-reported antisocial acts. Regression analyses revealed that secure attachment representations explained unique variance in several of these indicators of adjustment, independent of alternative measures of parenting.

Conclusion: Adolescents’ representational models of attachment are related to, but distinct from current parenting quality and provide unique insight into the understanding of adjustment.

S2-09-1**Pervasive Refusal Syndrome: comparing and contrasting clinical cases***Grahame, Victoria¹; Reid, Corrine²; Kaplan, Carole³; Guirguis, Suzy³; Rao, Sushma³*¹Regional Child and Adolescent Mental Health Services, Fleming Nuffield Unit, UK; ²Regional Child and Adolescent Mental Health Service, Fleming Nuffield Unit, UK; ³Regional Child and Adolescent Mental Health Service, UK

Pervasive Refusal Syndrome (PRS) is a relatively new diagnostic concept, that describes a rare and potentially life threatening condition, in which children refuse to walk, talk, eat, drink, engage in self care, and take part in day to day activities (Lask et al. 1991). However, at the present time PRS is not included in any of the psychiatric classification systems (ICD 10, DSM IV), although consensus exists within the literature as to its existence and treatment. The apparent extreme rarity of the disorder makes it possible that only a handful of newly diagnosed cases will be seen by clinicians per year. The applicants will discuss and share their clinical research experience of treating 7 new cases of PRS in a Regional CAMHS inpatient hospital. Patients with PRS often require hospital admission for assessment and exclusion of other medical, neurological and psychiatric disorders. However, because of the rarity, severity and multiple symptoms, many medical and psychiatric professionals have little experience of the treatment and rehabilitation that these patients require. This presentation will address the specific MDT management approach necessary to meet the complex needs of those patients with PRS as treatment is often counterintuitive, and some approaches can result in deterioration rather than improvement. In terms of improvement and recovery from the disorder, less is known about the long-term outcome. The applicants have undertaken a long term follow-up and will discuss issues relating to prognosis by reporting on the progress of four young people with PRS approximately 4–13 years after discharge. The applicants are also one of the few research groups that have clinical experience of working with male patients with PRS. This presentation will outline a specific MDT treatment approach for PRS, while encouraging audience participation and discussion around the clinical decisions and dilemmas involved in following this approach.

S2-09-2

Psychiatric disorders in children and adolescents presenting with unexplained chronic pain: prevalence and severity?

Knook, Lidewij¹; Konijnenberg, Antoinette²; van Engeland, Herman³; de Graeff-Meeder, Elisabeth³

¹University Medical Center Utrecht, Child and Adolescent Psychiatry, The Netherlands; ²University Medical Centre Utrecht, Department of Paediatric Nephrology, The Netherlands; ³University Medical Centre Utrecht, The Netherlands

Background: The prevalence of comorbid psychopathology among children with unexplained chronic pain (UCP) is high in unselected populations and pain clinics, yet the clinical relevance of this psychopathology in children with unexplained chronic pain referred for paediatric care is not known.

Aims: This study assessed the prevalence of clinically relevant psychiatric disorders and their predictors in children referred to a children's hospital for UCP.

Materials and methods: Psychiatric morbidity was assessed in 134 children referred for unexplained chronic pain, aged 8–17 years, using two standardized psychiatric interviews; the Diagnostic Interview Schedule for Children-parent version (DISC-P) and the semi-structured clinical interview for children and adolescents (SCICA). In addition clinical relevance was determined using a maladjustment criterion of 61 or lower on the Children's Global Assessment Scale (CGAS). Pain parameters were measured with standardized questionnaires. Results were analysed by logistic regression.

Results: According to the DISC-P, 21% of the children had clinically relevant psychiatric disorders, predominantly anxiety disorders (18%). According to the SCICA, 28% of the children had clinically relevant psychiatric disorders, consisting of anxiety, affective, and disruptive disorders (12, 19, and 9%, respectively). Headache (compared to musculoskeletal pain) was an independent clinical predictor of psychiatric morbidity (OR = 3.10; 95% CI 1.07–8.92, $p = 0.04$ /adjusted OR 2.99; 95% CI 1.02–8.74, $p = 0.04$).

Conclusions: Children referred for UCP often suffer from treatable psychiatric disorders. Child psychiatrist's ratings of child-reported symptoms and behavioural observation make an important contribution to the identification of specific psychiatric disorders. Children presenting with headache are particularly at risk for psychiatric comorbidity.

S2-09-3

Psychiatric comorbidity in epileptic children

Omar, Manal¹; Gad, Sawsan¹; Ryad, Geylan²; Tamman, Khaled¹; Moussa, Soud²

¹Ain Shams University, Institute of Postgraduate Childhood Studies, Medical Department, Egypt; ²Helwan University, Clinical Psychology, Egypt; ³Cairo University, Faculty of Medicine, Egypt

Epilepsy in childhood is a pervasive disorder that includes not only seizures but also significant effects on cognition, behavior and quality of life. Although behavior and emotional problems are common, the recognition of these problems is difficult.

Methods: This study assessed the psychiatric problems of epileptic children, using the childhood behavioral checklist (CBCL), covering the internalizing and externalizing behavior disturbances. 100 epileptic children and 100 healthy children are included in two groups of age ranged from 6–13 years (mean age 8.69), 60 boys, and 40 girls, in each group.

Results: 70% of the epileptic group indicates severe affection of behavioral disturbance on the total CBCL results (within the clinical range of psychiatric disorders), compared to only 14% in the control group. Attention problem, anxiety/depression and social problems showed the highest significant difference, while withdrawal/depression, aggressive behavior, rule breaking behavior and somatic complaints showed lower significant difference. Behavioral disturbance is more significant in boys than girls, and more in younger children than elder. EEG changes that showed significant relation were the withdrawal/depression symptoms.

Conclusion: Children with epilepsy showed more psychopathology than children from the general population. So medical care of epilepsy should go beyond seizure control; consultation liaison psychiatry has the characteristic body knowledge needed for an integrated "Biopsychosocial" approach.

S2-09-4

Sexual behavior and psychiatric symptoms in children

Wunsch, Katharina; Häföler, Frank

University of Rostock, Clinic for Child and Adolescent Psychiatry, Germany

Few studies analyzed the relationship between sexual behavior and psychiatric problems in preschool children and early school children. However, different mechanisms seem possible to connect both domains of problem behavior. The present study explores the nature and the scope of the association in German children. The sample comprises of two populations. Data from 158 children aged 5–8 years were collected in a field study. Another sample of 151 children of the same age who were treated at the Clinic for Child and Adolescent Psychiatry of the University of Rostock was analyzed as well. Both samples are compared in regard to the associations between psychiatric symptoms and sexual behavior. In both samples, parents rated the sexual behavior (Child Sexual Behavior Inventory, Friedrich 1997) and psychiatric symptoms (Child Behavior Checklist 4–18, Achenbach 1991). For the clinical sample, psychiatric diagnoses were obtained as well. For both samples, correlations between test-scores from CSBI and CBCL were calculated separately for girls and boys. Scores for both samples were compared using *t* tests for independent samples. Regardless of the quality of psychiatric symptoms, parents of children from the clinical sample reported more deviant sexual behavior. However, for both samples a significant correlation between sexually deviant behavior and psychiatric symptoms was found. In terms of diagnoses, sexually deviant behavior was reported more often for attachment disorders and externalizing behavior, the latter especially for boys. High degrees of deviant sexual behavior problems were associated with early forms of delinquent behavior. Deviant sexual behavior appears to be a part of psychiatric symptoms already early in life. These outcomes seem to match the results from adolescent and adult studies, yet more research concerning the patterns and meaning in early childhood has to be conducted.

S2-10-1**A controlled study of quality of life in young people with Tourette syndrome**

*Eddy, Clare*¹; *Rizzo, Renata*²; *Gulisano, Mariangela*²; *Agodi, Antonella*¹; *Barchitta, Martina*²; *Cali, Paola*²; *Robertson, Mary*³; *Cavanna, Andrea Eugenio*⁴

¹BSMHFT, Department of Neuropsychiatry, UK; ²University of Catania, Italy; ³UCL, London, UK; ⁴University of Birmingham and BSMHFT, UK

Background: Tourette syndrome (TS) may adversely affect Quality of life (QoL). In addition to tics, patients with TS can exhibit a range of behavioural difficulties, such as co-morbid obsessive compulsive disorder (OCD) or attention deficit hyperactivity disorder (ADHD). These features could exert further detrimental impact on QoL.

Aims: In this study we investigated QoL in TS by comparing young patients with this condition to both healthy individuals and a clinical control group comprised of individuals with epilepsy.

Methods and materials: The Youth Quality of Life Instrument-Research Version (Edwards et al. 2002) was used to assess QoL. Clinical scales were also administered to assess anxiety, depression and other behavioural symptoms.

Results: Overall, TS was found to be associated with lower QoL for certain items related to home, activities and social interaction. More severe tics had a greater negative impact on QoL. Pure TS was associated with lower QoL scores in the environment domain, poorer perceived QoL in general, and depressive features. Co-morbid OCD was linked to more problems in self and relationship QoL domains. Patients with TS and both OCD and ADHD as co-morbidities had more widespread problems. Conclusions: Young people with TS can report lower QoL in comparison to healthy individuals and young people with epilepsy. Social aspects of QoL may be more vulnerable to TS overall. However, co-morbid conditions may further determine which aspects of QoL are most affected.

S2-10-2**Clinical features associated with reduced quality of life in young people with Tourette Syndrome**

*Rizzo, Renata*¹; *Cavanna, Andrea Eugenio*²; *Gulisano, Mariangela*¹; *Agodi, Antonella*¹; *Barchitta, Martina*¹; *Cali, Paola*¹; *Robertson, Mary*³; *Eddy, Clare*⁴

¹University of Catania, Italy; ²University of Birmingham and BSMHFT, UK; ³UCL, London, UK; ⁴BSMHFT, UK

Background: Young people with Tourette syndrome (TS) can report reduced quality of life (QoL) in comparison to the general population and individuals with conditions such as epilepsy. Many patients with TS have symptoms of obsessive compulsive disorder (OCD) and/or attention hyperactivity deficit disorder (ADHD), or other emotional and behavioural difficulties which could exert varying impacts on QoL.

Aims: We investigated how tic severity and a variety of psychiatric and behavioural symptoms associated with TS were related QoL in TS.

Materials and methods: Young people with TS completed a self-report multidimensional QoL measure (Edwards et al. 2002) and a range of clinical scales to assess tic severity and the symptoms of anxiety, depression, OCD, ADHD and other emotional and behavioural symptoms. Correlations were conducted to examine relationships between QoL and scores on these measures.

Results: Symptoms of depression, OCD and ADHD exerted a widespread detrimental impact on QoL, while Tic severity was only significantly related to QoL in 'pure' TS.

Conclusions: Greater emotional and behavioural difficulties, including symptoms of OCD, appear most predictive of poor perceived QoL overall. Interventions focused on tic severity, depression and internalizing behaviors may most improve perceived QoL in pure TS.

S2-10-3**Development and validation of the Gilles de la Tourette Syndrome-Quality of Life Scale for Children and Adolescents (Canda-GTS-QOL), Italian version**

*Termine, Cristiano*¹; *Luoni, Chiara*¹; *Selvini, Claudia*¹; *Blangiardo, Rosanna*¹; *Eddy, Clare*²; *Silvestri, Paola*³; *Cali, Paola*⁴; *Balottin, Umberto*⁵; *Cardona, Francesco*³; *Rizzo, Renata*⁴; *Cavanna, Andrea Eugenio*⁶

¹University of Insubria, Varese, Italy; ²BSMHFT, UK; ³La Sapienza' University, Rome, Italy; ⁴University of Catania, Italy; ⁵IRCCS 'C. Mondino' Foundation, University of Pavia, Italy; ⁶University of Birmingham and BSMHFT, UK

Background: Gilles de la Tourette syndrome (GTS) is a chronic childhood-onset neuropsychiatric disorder with a significant potential impact on patients' health-related quality of life (HR-QOL). Recently Cavanna et al. (2008) developed and validated the first disease-specific HR-QOL assessment tool for adults with GTS (Gilles de la Tourette Syndrome-Quality of Life Scale, GTS-QOL). The aim of this study was the translation, adaptation and validation of the GTS-QOL for young Italian patients with GTS.

Methods: In stage 1 (scale translation), the forward-backward procedure was applied to translate the GTS-QOL from English into Italian language. In stage 2 (scale adaptation), four experts in GTS rephrased items that were deemed confusing by 40 healthy youths. The adjusted items were administered to a second sample of 100 young healthy subjects. In stage 3 (scale evaluation), the psychometric properties of the resulting scale were tested in 75 GTS patients recruited through three Departments of Child and Adolescent Neuropsychiatry in Italy.

Results: We developed a 27-item instrument to assess HR-QOL in young Italian GTS patients as a clinician-rated interview for 6–12 year-olds and a self-report questionnaire for 13–18 year-olds (Gilles de la Tourette-Quality of Life Scale in children and adolescents, Canda-GTS-QOL). The Canda-GTS-QOL demonstrated satisfactory scaling assumptions and acceptability. Internal consistency reliability was high (Cronbach's alpha > 0.7) and validity was supported by interscale correlations (range 0.4–0.7), confirmatory factor analysis and correlations with other rating scales and clinical variables.

Discussion: The Italian version of the Canda-GST-QOL is the first disease-specific HR-QOL tool for young GTS patients, satisfying criteria for acceptability, reliability, and validity.

S2-10-4

Health-Related quality of life in adult patients with Gilles de la Tourette's Syndrome

Mueller-Vahl, Kirsten¹; Dodel, Ines²; Mueller, Norbert³; Munchau, Alexander²; Dodel, Richard²

¹Hannover Medical School, Germany; ²Philipps-University Marburg, Germany; ³Ludwig-Maximilians-University Munich, Germany; ⁴University Hamburg Eppendorf, Germany

Objective: Gilles de la Tourette's syndrome (TS) is complex neuropsychiatric disorder defined by the occurrence of multiple motor and one vocal tic. However, the majority of patients suffers from comorbid psychiatric symptoms such as attention deficit hyperactivity disorder (ADHD), obsessive compulsive disorder (OCD), depression, anxiety, self-injurious behaviour, addiction, learning and sleeping disorders. The aim of this study was to investigate the health-related quality of life (HrQoL) in a large sample of adult patients with TS in Germany.

Methods: HrQoL was evaluated in 200 TS patients (mean age 34.9 ± 11.8 years) recruited from three German outpatient departments. Patients were asked to complete a semi-structured, self-rating interview. HrQoL was measured using the EQ-5D, depression was assessed using the Beck's Depression Inventory (BDI), and tic severity was rated using the Yale Tourette Syndrome Symptom List (TSSL) and the Shapiro Tourette Syndrome Severity Scale (STSS). Multivariate regression analyses were performed to identify independent predictors of HrQoL.

Results: In TS patients HrQoL was reduced compared to the general German population. The domains most affected were anxiety/depression (57.1%), followed by pain/discomfort (47.5%), usual activities (38.4%), mobility (14%) and self-care (6.6%). The mean EQ-5D visual analogue scale (EQ-VAS) was 65.4 ± 21.9 . In TS patients the mean BDI score was 12.3 ± 9.9 , which is considerably worse compared to healthy reference group (6.45 ± 5.2). The mean STSS value was 3.24 ± 1.1 . In multivariate analyses, depressive symptoms contributed considerably, while the severity of symptoms as well as age only contributed minimally to HrQoL in the model ($R^2 = 0.54$).

Conclusions: HrQoL is considerably reduced in patients with TS. The main independent factors for determining HrQoL were depression, severity of tics and patients' age. Thus, the diagnosis and treatment of comorbid depression is of major importance in adult patients with TS.

S2-10-S

Health-related quality of life in Tourette syndrome

Cavanna, Andrea Eugenio

University of Birmingham and BSMHFT, Department of Neuropsychiatry, UK

This symposium covers the state of the art of research on Health-Related Quality of Life (HR-QOL) in children, adolescents and adults with Tourette syndrome, with directions for the development of disease-specific HR-QOL instruments for this heterogeneous patient population. Symposium Health-Related Quality of Life in Tourette syndrome Chair: Andrea E. Cavanna (UK) Presentations (15' + 5'

QandA): Clare M. Eddy (UK)-A Controlled Study of Quality of Life in Young People with Tourette Syndrome Renata Rizzo (ITA)-Clinical Features Associated with Reduced Quality of Life in Young People with Tourette Syndrome Cristiano Termine (ITA)-Development and validation of the Italian version of the Gilles de la Tourette Syndrome-Quality of Life Scale for Children and Adolescents (CandA-GTS-QOL) Kirsten Müller-Vahl (GER)-Health-Related Quality of Life in adult Patients with Gilles de la Tourette's Syndrome Discussion and Concluding Remarks (30')

S2-11-1

Comprehensive treatment approaches to sleep and circadian rhythm disturbances in children with autism spectrum disorder

Schröder, Carmen¹; Chabaux-Delarai, Catherine¹; Bourgin, Patrice²; Danion-Grilliat, Anne¹; Bursztejn, Claude¹

¹University Hospital Strasbourg, Department of Child Psychiatry, France; ²University Hospital Strasbourg, University Sleep Clinic, Department of Neurology, France

Though highly prevalent in Autism Spectrum Disorders (ASD), sleep and circadian rhythm disturbances are not systematically assessed, and comprehensive treatment approaches are often lacking. In this symposium, we will present a comprehensive approach to sleep and circadian rhythm disorders in children with ASD, developed at the Strasbourg University Hospital, France. We will discuss in detail (i) the most common sleep disturbances in children with ASD as well as (ii) the neurobiological and psychodynamic factors that might contribute to these disturbances; (iii) the range of diagnostic tools used to refine their assessment; and finally (iv) a comprehensive therapy developed for children with ASD and their families, targeting neurobiological, psychodynamic and environmental factors through a multi-component treatment approach. Among others, we will detail herein sleep hygiene measures, cognitive-behavioral therapy of sleep disturbances geared to the functioning of children with ASD, as well as complementary pharmacological treatment options.

S2-11-2

Group therapy with in ADHD

Bourrat, Marie-Michelle; Olliac, Bertrand

CH de Limoges, Psychiatrie de l'enfant et de l'adolescent, France

The children with ADHD we meet in consultations in child psychiatry, require often particular adaptation of treatments. Therapeutic groups for children and adolescents are specific practices we have tried as a possible response and an access to treatment in the field of ADHD. Indeed we wished to make the access to treatment easier and facilitate the collaboration with parents and their children by this therapeutic approach in accordance with the different states of development. Hence the not inconsiderable interest of a therapeutic tool, whose use can surprise at first, but has the merit of often allowing a better integration and participation of the entire family in the treatment. We will expose the specific organization, and some adjustments of the therapeutic environment we have used.

S2-11-3**A therapeutic game for Social Skills Training Groups**

Pourre, Frédéric; Aubert, Eric; Andanson, Julie; Raynaud, Jean-Philippe

CHU de Toulouse, Psychiatrie de l'enfant et de l'adolescent (SUPEA), France

A newly developed board game for social skills training is used in a setting intended for two groups of six teenagers: one group with social anxiety Disorder and the other with Asperger syndrome. This medium mobilizes in a playful way: imagination, expression and emotional decoding, theory of mind, cognitive analysis and behavioural skills, etc. After periods of 26 sessions on average, results assessed by psychometric tests show a significant improvement in scores corroborating the observed clinical course. Attractive and adaptable, this game has emerged as a useful therapeutic tool for social skills training in both groups.

S2-11-4**Multi Social Experiences Based Group therapy for adolescents with Asperger Syndrome**

Andanson, Julie¹; Pourre, Frédéric²; Aubert, Eric²; Raynaud, Jean-Philippe²

¹Centre Hospitalier Universitaire de Toulouse, Psychiatrie de l'enfant et de l'adolescent (SUPEA), France; ²CHU de Toulouse, Psychiatrie de l'enfant et de l'adolescent (SUPEA), France

The aim of this presentation is to show the efficiency of skills training group therapy based on multidimensional social experiences, with seven adolescents with Asperger syndrome. Learning modalities are mainly based on progressive situation scenario exercises, facilitating awareness and the cognitive, emotional and behavioral modifications which are expected. In these groups are worked, in a global approach, concepts like cooperation, pretending, cognitive flexibility, empathy, verbal and emotional expression. After 1 year of weekly sessions, standardized psychometric tools show a significant improvement in outcomes, remaining after 9 months.

S2-11-S**Four original approaches in child and adolescent psychiatry**

Raynaud, Jean-Philippe¹; Bourrat, Marie-Michelle²; Schröder, Carmen³; Pourre, Frédéric¹; Andanson, Julie¹

¹CHU de Toulouse, Psychiatrie de l'enfant et de l'adolescent (SUPEA), France; ²CH de Limoges, Psychiatrie de l'enfant et de l'adolescent, France; ³CHU de Strasbourg, Psychiatrie de l'enfant et de l'adolescent, France

In this symposium, will be presented and discussed four original therapeutic approaches in child and adolescent psychiatry. These approaches address different areas of mental disorders: pervasive developmental disorders, anxiety disorders, sleep disorders and ADHD. Schröder et al. will describe their comprehensive approach to sleep and circadian rhythm disorders in children with autism spectrum disorders and their parents, developed at the University Hospital of Strasbourg, France. Bourrat et al. from Limoges University, France, will present their practice of therapeutic groups as a possible response and way of access to treatment in ADHD. Pourre et al. from Toulouse University, France, will show how they developed and experienced a specific therapeutic game, supporting social skills training in adolescents with Asperger Syndrome or Social Anxiety Disorder. Andanson et al. also from Toulouse, will describe a multi-Social-experiences based group therapy in adolescents with Asperger Syndrome, opening new perspectives in this field. These presentations, sharing practices and results, will allow an open discussion.

S4-01-1**Pathological Internet use (PIU) in children and adolescents: developmental psychiatric aspects of an emerging clinical problem**

Bilke-Hentsch, Oliver

Vivantes Netzwerk Berlin, CAPPP, Germany

Introduction: Modern electronic media, online role-playing and online gambling have changed adolescent socialisation in the last decade. As many clinicians and researchers interpret this social and technological problem as an aspect of dependency, there is a need for clinical useful terminology and diagnostic criteria in order to plan research and treatment programs. On the other hand, both robust epidemiological data and adequate classification are needed, as the diagnosis itself and its validity is not established yet and still under discussion in DSM-V.

Methods: Research on classification systems such as ICD-10, DSM-IV, DSM V and on medical and psychological databases and single publications on the topic from 1996-2010. Research on existing treatment programs in Europe, both in and out-patient as part of child and adolescent psychiatric approaches to this field.

Results: There are no consistent possibilities and procedures to diagnose or classify a distinctive subgroup of patients with severe dependency problems concerning interactive electronic media. DSM-IV and ICD-10 provide the well known categories of impulse control disorders, gambling or dissociative behaviour only covering a part of the individual problems, while DSM V is still considering the relevance of the clinical problem as such. In this context the existing CAP diagnostic and treatment approaches are individually oriented there is few research on effectivity and efficacy.

Conclusion: With the increasing impact of electronic media on children, adolescents and families, there is a need of specialised developmental oriented classification systems to distinguish clearly between phasic behaviour patterns in adolescents and different severe disease processes that maybe summarized as PIU and to establish multimodal treatments where needed.

S4-02-1**Animal-assisted interventions for children and adolescents: What animals mean to them, why and when AAs work, and who should be involved***Turner, Dennis C.*

University of Zurich and Azabu University (Japan), IAHAIO and ISAAT, Verhaltensbiologie, IEU, Switzerland

Animal-assisted interventions are now receiving the formal attention of national medical/health research foundations after having been expounded in the popular media for several decades. There is indeed sufficient preliminary evidence for physical and mental health benefits of interacting with (companion) animals in the general public and for the success of therapeutic interventions to warrant that support. The effects, especially on children and adolescents, will be reviewed and include: The development of empathy and non-verbal communication skills; opening channels of communication between the therapist and patient; the provision of socio-emotional support; improvement in youth diagnosed with ADHD and conduct disorder; and alleviation of depressive moods and reduced anxiety. Correlations between empathy toward animals and empathy toward peers as well as between the former and emotional intelligence have been established. The ‘cycle of violence’—the relationship between domestic violence and cruelty toward animals—but also the usefulness of animal-assisted interventions to treat this problem are receiving much attention today. The results of these studies have prompted the International Association of Human-Animal Interaction Organizations (IAHAIO) to call for action by international agencies, national governments and health and education ministries in order to support more research and openness toward AAs. Nevertheless, the International Society for Animal-Assisted Therapy (ISAAT) cautions that only qualified therapists with additional training in the correct involvement, and treatment of animals, should direct this work. Continuing education programs for such professionals need to have a high standard and be recognized or accredited.

S4-03-1**Early surgery in Tourette Syndrome?***Sassi, Marco¹; Servello, Domenico¹; Porta, Mauro²; Menghetti, Claudia¹*

¹IRCCS Galeazzi, Neurosurgery, Italy; ²IRCCS Galeazzi, Movement Disorders and Tourette Center, Italy

Tourette syndrome (TS) is a complex clinical syndrome in which the early onset in patient’s life is usually paralleled with a waxing and waning course, and often with an almost complete disappearance of symptoms by the reach of the adult age. Nevertheless, manifestations can be severe enough to severely alter the social integration of the patient. This is particularly true considering the age in which the clinical picture manifest, which are crucial for proper social functioning of the patient. Nowadays, TS is routinely treated with dopaminergic medications and most of the times control, although with some adverse effects, the most disabling clinical symptoms. On the other hand, those patients failing to reach a proper control of the disease, or severely burdened by collateral events related to medications, usually develop a social disorder that persist throughout life. In our opinion, the guideline concerning indication to treatment with Deep Brain Stimulation should take into account this significant

feature. Thus, in selected cases in which complete refractoriness or severe adverse effects are demonstrated, DBS should be proposed as an “early surgery” treatment. Our experience is presented and discussed.

S5-01-S**The overlap between ASSD and ADHD: epidemiology, genetics and implications for treatment***Simonoff, Emily*

King’s College London, Institute of Psychiatry, Child and Adolescent Psychiatry, UK

Background: Current diagnostic criteria exclude the possibility of dual diagnosis of ADHD and autism spectrum disorders (ASDs). However, researchers and clinicians have recently appreciated the co-occurrence of symptom patterns that otherwise fully meet the criteria for these two disorders.

Aim: The aim of this symposium is to consider the overlap between ADHD and ASD from the perspective of epidemiology, aetiology, including possible biomarkers, and treatment approaches. Senior researchers will present their own results in the context of the wider findings in the field to provide a broad and current perspective.

Materials and methods: Presentations will include: Dr P Santosh, Clinical challenges of differential diagnosis; Prof E Simonoff, Epidemiology of ADHD and ASD: evidence and alternative models; Prof P Bolton, Biomarkers for ADHD and ASD, Dr. Myriam Harfterkamp Pharmacological approaches to AHD in ASD.

Results: This symposium will highlight the challenges in differential diagnosis and structured approaches that may be used. Shared and disorder-specific genetic and neuropsychological factors, along with their implications for use in diagnosis will be summarized. Epidemiological studies will be used to review the rate of overlap shared and different risk factors and possible causal mechanisms. This will show that intellectual disability has a different role for ADHD according to whether ASD is present. The latest findings with regard to pharmacological interventions and their impact on different symptoms will be discussed. This will include methylphenidate, atomoxetine and the atypical antipsychotic medications.

Conclusions: The audience will have a comprehensive overview of the state of the art.

S5-02-1**Clinical treatment of children with ASD: empowering child and family. An introduction***Verburg, Monique*

Dr. Leo Kannerhuis, Centre for Autism, The Netherlands

Background: Many children presented for treatment in our clinical setting seem to have poor perspectives. Frequently there are significant developmental stagnations and severe problems at home and at school. Often caregivers and parents, after various unsuccessful attempts, have concluded that for this particular child living at home is no longer an option. But the alternative, children with ASD ‘hopping’ from clinic to clinic and being institutionalised for years, and

parents feeling incompetent to raise their vulnerable child, can also be harmful for child and parents, especially in the long term.

Aims: Improving the long term perspective of both child and parents by strenuously focusing on the necessary conditions needed to bring up the child at home.

Methods: Main focus of clinical treatment has become ensuring that children are able to return to parents after clinical treatment. Central goal is empowering child and parents by making them more aware and competent. This requires intensive cooperation between staff and parents. Explicit parental commitment to collaborate in trying to bring the child back home has become a leading inclusion criterion for clinical treatment. It is necessary to abandon the idea that the disruptive behavior and the handicaps of the child and the current inability of the parents are unchangeable. Out-of-the-box thinking is needed, breaking fixed patterns, tuning in on child and parents and supporting them in developing new behavior. The lecture will focus more specifically on the various aspects of treatment supporting this view.

Results: Since the fundamental shift in view the percentage of children returning to parents has increased significantly. Treatment duration and waiting-list shortened and turnover increased.

Conclusion: The approach described above has led to an increase of children going back home after clinical treatment and therefore brightens the futures of families with ASD.

S5-02-2

An applied behavior analysis training package in a child psychiatric clinic: a chance to empower staff and parents?

Huskens, Bibi¹; Verburg, Monique²

¹Dr. Leo Kannerhuis, Research and Development, The Netherlands;

²Dr. Leo Kannerhuis, Child Psychiatric Clinic, The Netherlands

Because of a growing need for a scientifically based method to improve both the learning environment in the residential treatment groups and at home an Applied Behavior Analysis (ABA) training package was developed. Principles of Pivotal Response Treatment (PRT) were adapted to the residential facility and incorporated in the training. The goal was to improve the learning environment in the clinic and at home in order to increase child social initiatives. Secondary goal was to empower parents and to make them feel more self-confident in growing up their child with ASD. An ABA staff training package was developed in order to increase learning situations in the clinic. Elements within the package were a 2-day training workshop in ABA techniques, live feedback and video feedback during 3 months after training. ABA techniques used in the training were prompting, fading, shaping and reinforcement. A multiple baseline design across four residential treatment groups was used to evaluate the staff training. To increase learning situations at home a parent group training was also developed. In the training parents were introduced with the same ABA techniques as used in the staff training. Parents were asked to record home interactions on video and to show it in the training sessions in order to receive feedback. Parents participated in eight group sessions and two individual sessions. A non-concurrent multiple baseline design across three parent groups is being used. At the time of the congress the second parent group will finish their last sessions. The first results of the ABA staff training package and some preliminary results of the ABA parent group training will be discussed.

S5-02-3

Psychiatric Family Treatment Autism (PFA): hope and reality for families with ASD

Aerts, Cisca

dr. leo kannerhuis.nl, The Netherlands

Introduction: Autism Spectrum Disorder (ASD) determines to a large extent the lifestyle of the person and his environment; there are many psychiatric problems for most of the family members. We developed the Psychiatric Family treatment for Autism (PFA) from practice based to evidence based practice. The PFA is a competence directed home-treatment for families with one or more members with ASD.

Objectives: The focus is on the family as a whole and each family member individually. A family trainer works weekly in the home at targets the family has made.

Aims: To involve every family member to improve the individual and family strengths.

Methods: With the standardized and validated questionnaires (VGFO, SCL-90, SDQ and CBS-A/K) we focused on the parents' practises, parents' personal well-being and their perception of each of their children's problems before and after the PFA treatment. Also each child of the family answered questions about his competences. The second research focused on the treatment integrity of the PFA. We measured the treatment integrity of the PFA using questionnaires and home observations.

Results: We demonstrated a significant improvement of the parental functioning (VGFO), the parents' perception of their children's problems (SDQ) and the self esteem of the children with and without ASD (CBS-A). The mothers reported a progress in personal well-being. The principles of the PFA are confirmed by a high agreement of the trainers and the families. The trainers have a high treatment integrity.

Conclusion: An integrated family treatment (PFA) has a positive effect on the well-being of all the family members. We can discuss whether this means that PFA can help to prevent a clinical treatment. Together with autismcare 24/7 and PRT we can empower the family with ASD to be better equipped for the problems they come across in the future.

S5-02-4

Autism 24/7, self management 24/7

Timmer, Saskia

Dr Leo Kannerhuis, RandD, Inovation, The Netherlands

People of normal intelligence suffering from autism need intensive treatment and often lifelong support. Therefore the Dr. Leo Kannerhuis developed their model of 'life course guidance' as basis for their treatment and rehabilitation approach for people with autism. 'Life course guidance' offers the necessary support in all life stages, on all life domains, whenever needed. Besides partnership with the family, pro-active monitoring, early support during transitions and patient participation are key-elements of this model. In this project, autism care 24/7, self management 24/7, the Dr. Leo Kannerhuis realizes the model of life course guidance by stimulating patient participation in both treatment and self management by using innovative tools: e-treatment, the use of ICT applications to enhance cooperation and improve transition between the

healthcare workers and the patient and his family. Doing so a 24/7 network for self management arises in which the patient is the key player.

Aim and objectives: The main purpose of the project was to develop a network of ICT Tools (e-treatment) to support daily self management for people with autism and thus improve their independence and daily participation in society.

Results and presentation: In the presentation the life course model and various ICT applications supporting self management will be presented: for example the Personal Health Record, the stress management application, a medication support, a daily life coach. We will particularly focus on the implications for the patients and the caregivers and show first practical experiences from their point of view. Finally we will show first results of research.

Discussion: Finally the discussion will focus on the potential of the first results and the possibilities of combining powers of e-treatment and others treatment methods to empower families with ASD.

S5-02-S

Combining powers: home treatment, centre-treatment and e-treatment for families with ASD

Verburg, Monique; Huskens, Bibi; Aerts, Cisca; Timmer, Saskia

Dr. Leo Kannerhuis, centre for autism, The Netherlands

In the Dr. Leo Kannerhuis (LKH), centre for Autism in the Netherlands, treatment is considered as a partnership between centre and family.

Main aims of treatment are empowering child and parents and decreasing the problems evolving from ASD.

The fundamental view is that the best place for children to grow up is at home, whatever their disorder may be. That is why the LKH is increasingly focusing on enlarging the percentage of children going back home after clinical treatment and on bringing treatment to the home setting.

To reach these aims, various methods have been developed.

All methods start with three basic assumptions:

1. Children have to learn how to integrate their vulnerabilities in their daily lives.
2. Parents have to become adequately equipped to support the development of their vulnerable child.
3. It is necessary to empower the environment (siblings, school, work, etc.) to be adapted to the needs of the individual child.

In her presentation '*Clinical treatment of children with ASD: empowering child and family. An introduction.*' M. Verburg will focus on the fundamental view mentioned above and how this view has become the guideline in clinical treatment.

In her presentation '*An Applied Behavior Analysis training package in a child psychiatric clinic: A chance to empower staff and parents?*', B. Huskens will discuss the ABA training package for staff and parents and will reveal the preliminary results.

In her presentation '*Psychiatric Family Treatment Autism (PFA): hope and reality for families with ASD.*' C. Aerts will refer to the principles of supporting families with ASD through home treatment.

The presentation of S. Timmer '*Autism 24/7, self management 24/7.*' emphasises the potential role of e-media in supporting self management of families with ASD. The various possibilities of this medium will be discussed.

Finally the discussion will focus on other potential possibilities of combining powers to empower families with ASD in order to brighten their futures.

S5-03-1

Addressing suicide prevention in a Canadian context: a case study in Nova Scotia

Kutcher, Stan

Department of Psychiatry, Dalhousie University, Halifax, Nova Scotia, Canada

Youth suicide is an issue that has been the focus of public health interest in Canada and its Provinces over the last decade. This interest has included the development of policies directed at suicide prevention and the application of government funded programs designed to effect this goal. The Province of Nova Scotia recently created and enacted a Provincial Suicide Prevention Strategy. This presentation will review the process by which that was created and the outcomes of that work. The context of suicide in the Province over the last decade will be used to frame a critical analysis of this policy and its development. Lessons learned from this process could be used to inform other jurisdictions in their work on this topic. This abstract is part of pre arrange symposium "New Perspectives on Youth Suicide and Prevention"

S5-03-2

Deliberate self harm and suicide in young people in Ireland

McNicholas, Fiona

Department of Child Psychiatry, University College Dublin., Ireland

Background: Ireland continues to have a very high and stable rate of completed suicide, representing the leading cause of death in young men aged 19–24. The rates of deliberate self harm have increased by 5% from 2008 to 2009. Whilst rates in females aged 15–19 are particularly high (635/100,000), there has been an alarming increase of 21% in males aged 20–24 (526/100,000) and of 12% in young males aged 15–19 years (429/100,000) from 2008 to 2009.

Methods: This presentation will present an overview of both DSH and suicide rates in an Irish context, and draw attention to trends over time. An 11 year case note review of all children presenting to the main paediatric hospital in Dublin will be presented, and comparisons made with other countries. A sub sample will be followed up to assess rates of repetition.

Results: The National Registry of Deliberate Self-Harm (2009) reported that 11,966 individuals presented to Irish hospitals with DSH. During the 11-year study period, 231 children, mean age of 12.85 (range 6–17 years), presented to the main paediatric hospital in Dublin: most were female (74.1%), overdose was the most common method (81.2%) and more than half of the group (55.7%) expressed suicidal intent. Despite their young age, 10.9% of this sample had a history of substance use, and a significant minority (8.7%) had used alcohol on the day of presentation.

Conclusion: Ireland has undergone significant and rapid changes over the last 10–15 years, including our current economic downturn, increasing stress on young people and their families, whilst at the same time reducing services. Alcohol use or misuse amongst Irish adolescents continues to increase, being an independent risk factor for DSH and suicide. This abstract is part of pre arrange symposium "New Perspectives on Youth Suicide and Prevention"

S5-03-3 Youth suicide and prevention in Israel

Apter, Alan

Schneiders Children's Medical Center of Israel, Sackler School of Medicine, Israel

In Israel, approximately 400–500 people commit suicide each year. More than one-third of registered suicide attempts were committed by youth in the 15–24 age group. Although Israel has been slow to recognize the value of a national suicide prevention program compared to other developed countries, recent developments are encouraging. Several governmental and non-governmental initiatives have been instituted by the Inter-Ministerial Committee for Suicide Prevention, Path to Life, a parent–professional alliance, and the Ministries of Health, Welfare and Education. Together, these are expected to lead to a concerted unified nationwide effort to build a national suicide prevention plan. Even though Israel has not yet adopted an official suicide prevention plan, the Israel Defence Force has taken a significant step toward this goal. A first draft of action has been presented to the Israeli Ministry of Health which includes the following components: (1) Updated and detailed epidemiological database on suicide and attempted suicide, (2) mental health and suicide awareness campaigns for the public and gatekeeper (primary care physicians, religious functionaries, policemen, teachers) training for target groups. (3) Cooperation with the media and actions to raise public awareness, such as posters, cinema spots, leaflets, public events, and Internet sites. (4) Support for high-risk groups and their families by self-help campaigns, parents' associations, crises centers, and direct access to professional help during crises. (5) School-based prevention programmes i.e. The Teen Screen program, Question, Persuade and Refer program, a skills-training programme for students. (6) Assessment of psychotherapies targeting suicidal individuals and provision of a better chain of care. Studies of treatments that target suicidality specifically, such as CBT and DBT are in the planning stages. (7) Lethal-means restriction This abstract is part of pre arrange symposium "New Perspectives on Youth Suicide and Prevention".

S5-03-4 Adolescent suicide statistics and prevention in Lithuania

Skokauskas, Norbert

Department of Psychiatry, Trinity College Dublin, Ireland

Background: Almost every year for the past 15 years Lithuania has led in suicide rates per 100,000 per capitat and it is extremely disturbing that this problem has become increasingly associated with the youngest inhabitants of the country.

Objectives: This paper aims to present and discuss dynamics of adolescent suicide rates and prevention programs in Lithuania.

Methods: A critical review of studies on adolescent suicide and the data from the National Statistics Office; an analysis of cultural, socioeconomic, historical and other factors which could explain dynamics of suicide rates in Lithuania; an overview of prevention programs.

Results: Adolescent Suicide mortality in Lithuania has shown great variation. In 1991 adolescent suicide rates were the lowest for decades. They rose a sharply following the restoration of independence in 1990. The suicide rate in the age group of 15–24 increased threefold between 1990 and 1997 (from 11 to 30 per 100,000), before settling in mid-to-high twenties. The "Lithuanian Health Programme", the "National Suicide Prevention Programme", the "National Mental Health Strategy" include clear goals and strategies to improve the mental health of the population, and decrease the prevalence of suicides. Still in Lithuania adolescents aged 15–19 commit suicide four times (23.9 per 100,000) more often than in the USA (8.0 per 100,000) and neighbouring Poland (8.4 per 100,000), and thirteen times more often than in Portugal (1.8 per 100,000).

Conclusions: Several suicide prevention programs have been commenced in Lithuania. Suicide rates decreased somewhat among adolescents in the past decade. Further research on the causal relationship between suicide rates and prevention programmes is required in order to ensure that such programmes are targeted appropriately and effectively. This abstract is part of pre arrange symposium "New Perspectives on Youth Suicide and Prevention"

S5-03-S New perspectives on youth suicide and prevention

Skokauskas, Norbert

Kaunas University of Medicine, Lithuania

Dr. Norbert Skokauskas (Chair) Kaunas University of Medicine, Lithuania Dr. Brendan Doody (Discussant) Trinity College Dublin (TCD), Ireland Addressing Suicide Prevention in a Canadian Context: A Case Study in Nova Scotia Prof. Stan Kutcher, Dalhousie University, Canada Deliberate Self Harm and Suicide in young people in Ireland Prof. Fiona McNicholas, University College Dublin, Ireland Youth Suicide and Prevention in Israel Prof. Alan Apter, Sackler School of Medicine, Israel Adolescent Suicide Statistics and Prevention in Lithuania Dr. Norbert Skokauskas, Kaunas University of Medicine, Lithuania and TCD, Ireland.

Background and objectives: Although traditionally suicide rates have been highest among the male elderly, rates among young people have been increasing and now suicide is one of the leading causes of death in many countries for young people ages 15–24. An estimated 12–25 nonfatal suicide attempts occur per every suicide death. This symposium aims to review youth suicide including risk factors, epidemiology and successful prevention initiatives in Europe, Asia and North America. Teaching Methodologies: In this 120 min symposium, we will use 100 min of 4 (25 min each) interactive lectures, 20 min of feedback, comments, group discussion and questions.

Results: Youth suicide is influenced by a number of factors including the presence of a primary psychiatric disorder, substance abuse, the economic status and education level of primary caregivers, social acceptance, culture and religion. Youth suicide rates vary widely among countries. Despite numerous prevention initiatives, suicide remains one of the leading causes of death in youth and there is an urgent need for the collaboration between countries to facilitate the sharing of successful prevention programs, which will potentially lead to a decrease in the global prevalence of youth suicide. All speakers' abstract will be submitted separately.

S5-04-S UEMS CAP. Core competency based curriculum for child and adolescent psychiatry trainees across Europe

*Bailey, Susan Mary*¹; *Jacobs, Brian*²; *Simmons, Meinou*³; *Tsiantis, John*⁴; *Londahl, Gunnel*⁵

¹UEMS CAP Board and Section, FACTS Department GMW (NHS Trust), UK; ²South London and Maudsley NHS Trust, Children's Department, UK; ³Current CAP Chair, EFPT, UK; ⁴UEMS CAP Board and Section, Greece; ⁵UEMS CAP Board and Section, Sweden

Background: Medical training across the world has now moved to a core competency based framework. The training sub group of the UEMSCAP Section and Board are currently revising the curriculum and log book for all trainees. From ongoing feedback from both trainers and trainees the original log book has been well received and used as a lever to develop specialist child mental health services across all countries in Europe.

Methods: Presentation of draft new curriculum and log book to share with colleagues draft of core competencies for comment on form, content, utility and transposability of new curriculum across Europe, recognising the very varied developmental stage of child psychiatry as a speciality in each country Followed by open discussion and collection of comments from all colleagues to inform the final version of the curriculum and log book desired outcome and future steps: (1) To utilise feed back from colleagues in order to deliver the very best curriculum and log book we can, to support the mental health of children across Europe. (2) To open up discussion about how UEMSCAP can support and provide framework for life long learning for all child and adolescent psychiatrists. (3) To provide a forum to discuss how trainers can ensure we offer best training experience to the future generations of child and adolescent psychiatrists.

S5-05-1 An analysis of the Paws for Tales dog-assisted reading program

Alden, Anne

Independent Scholar, USA

The use of therapy dogs has been gaining popularity in animal assisted education. However, there is very little research on programs that promote literacy by encouraging children to read books to dogs in libraries. Studies have shown that the presence of a dog reduces stress and promotes relaxation (Burton 1995; Friedmann 2000; Friedmann and Thomas 1995; Hart 2000; Serpell 2000; Wilson 1991). Further, dogs provide a safe, non-judgmental atmosphere, making it more comfortable for a child to open up and communicate with a counselor in a therapy setting (Burton 1995; Chandler 2001; Nebbe 1991). It follows that reading aloud to a dog may help children gain confidence in their skills and increase their enjoyment of reading, particularly if they face language, learning or emotional challenges.

Non-participant observation and semi-structured audio-taped interviews were conducted with children, volunteers and librarians in the Peninsula Humane Society and SPCA "Paws for Tales" reading

program at libraries in San Mateo County, California, USA. Parents filled out questionnaires on their child's experiences with both reading and with dogs. Volunteers commented on aspects of their training and on their experiences in the library literacy program. Data from interviews and questionnaires were analyzed to find themes. A general description of reading programs and therapy dog and volunteer training was reviewed and analyzed with suggestions for future refinement and development of animal assisted reading programs. Themes were based on feelings and perspectives of participants, librarians and volunteers for the "Paws for Tales" program. Several themes emerged, including children's enjoyment of interacting with dogs and reading and the non-threatening and comfortable situation created by dogs. Comprehensive training for dogs and volunteers and involvement of human service professionals is discussed as an important aspect for the effectiveness of future reading programs.

S5-05-2 Luetaan koiralle-study. Children with reading problems read to a dog

*Halsila, Tiia*¹; *Kittilä, Leena*¹; *Kiiski-Mäki, Hanna*¹; *Ikäheimo, Kaija*²

¹University of Turku, psychology, Finland; ²Child Psychiatry, Independent Scholar, Finland

Animal-assisted education is rapidly increasing in Finland. Preliminary findings indicate that animal assisted methods can be effective with children. In the "Paws for tales"—study children enjoyed interacting with dogs and reading in the non-threatening and comfortable situation created by dogs (Alden 2010). Preschool children (age 3–5) performed motor skill tasks faster in the presence of a dog (Gee et al. 2007) indicating that the presence of a dog increased children's motivation to complete tasks. Preschoolers (age 3–5) made fewer errors on object categorization task in presence of a dog instead of a stuffed dog (Gee et al. 2010) indicating that the dog has positive impact on performance of cognitive tasks. School-related self-esteem stayed stable after school-vacation in children (age 12–13) reading in a group to a dog instead of a teacher (Beetz and Bocker 2010) indicating better motivation to continue reading by themselves after the program.

Aim of the study: To study children's enjoyment of reading and change in their reading skills after reading to a dog and to a stuffed dog.

Materials and methods: Children 8–10 years on 2–3 grades in an ordinary elementary school with problems in reading and reluctant to practice reading skills.

Study design: Intervention group (N = 8) and control group (N = 8) children read 10–20 min once a week for 15 weeks in Kaarina library. The intervention group reads individually to Hali-Berni dog (bernese mountain dog) accompanied by its handler and he control group to a stuffed dog with its "handler". Follow-up is 6 months.

Methods: Pre-test: assessment of cognitive capacity and neuropsychological profile; pre- and post-tests: decoding, reading comprehension, behavior in reading situations, parent/teacher evaluation of child's strengths and difficulties (SDQ); each reading session: reports of parent and adult dog handler about child's reading behavior and child's self evaluation about reading enjoyment. Preliminary findings will be presented.

S5-05-3**Dogs in child and adolescent psychotherapy***Ikäheimo, Kaija*

Independent Scholar, Child Psychiatry, Finland

Dogs have been used in child and adolescent psychotherapy since 1960s (Levinson 1969). Child and adolescent psychotherapists with different theoretical orientations use dogs. All human-animal relationships have common features found in research: (1) physical (e.g. oxytocin), (2) social, (3) psychological. Animal provides multisensory stimuli (auditory, visual, tactile, olfactory), but do not overtax in verbal and cognitive ways. Often they stimulate children the need to communicate verbally and nonverbally (McCardle et al 2011). All of this is present also, when a dog is in psychotherapy sessions. Nonspecific factors as the nature of therapeutic relationship, the therapist's sincerity and authenticity are important in deciding the success of psychotherapy. Very important is that the child feels the presence of the psychotherapist. The most important healing factors in any psychotherapy are: to be understood, to get attention and to be accepted as you are. This concerns all forms of psychotherapy. Fine (2004) suggests three basic realms in which animals may be useful: (1) as facilitators of social interaction; (2) as catalysts for emotion; and (3) as adjuncts to clinicians. The presence of an animal makes the therapeutic environment seem more friendly and therapy itself less threatening. An animal may serve as transitional object and attachment figure (Kruger and Serpell 2006). Important difference in individual psychotherapy is the change from a dyadic therapeutic relationship to a triadic relationship. Many disorders have been described to benefit from animal-assisted therapy and psychotherapy: Internalizing disorders (depression, anxiety) with a tendency to withdraw and often with a reluctance to engage with the therapist; developmental disorders with social impairment and attachment (Asperger and autism), ADHD, oppositional defiant disorder, conduct disorder (Fine 2006; Kruger et al 2004; Wilson and Turner 1998; Cusack 1988) often accompanied by depression.

S5-05-4**Dog-assisted activities in Finland***Haapasaaari, Maarit¹; Ikäheimo, Kaija²*¹Hali-Bernit, Finland; ²Child Psychiatrist, Turku, Finland

Hali-Berni started in Finland in 1999. Who can be Hali-Berni dog? It does not depend on the breed but of the character of the dog. Dogs are trained pet dogs. The most important feature is that the dog likes people, comes actively to strangers, loves to be scratched and enjoys proximity. Dogs visit homes for elderly, mentally retarded, disabled people, mental health patients, children's homes, daycare centers. They give joy and pleasure just by their presence. They accept you as you are. Touching is very important. Hali-Berni holder must be committed to do this voluntary work, willing to give joy and good experiences to elderly, children and disabled and willing to share their own dog. Visits can be made from once a month to once a week. Amount of hugging portions (=one visit of a dog and a holder) has grown very rapidly from 72 in 2007 to 883 in 2010 in Turku and to 1250 in Finland. Visits are free of charge. A dog and its holder are tested. The new holder must make some visits first without the dog

and then with a dog with experienced Hali-Berni. Puppies are also accepted and they are welcome everywhere. In Finland Hali-Berni has taken part in many studies. In Turku area: how dogs can effectively be used in child welfare (Kallio and Rintamaa 2008). Newest is Luetaan koiralle-study. In Helsinki area there have been studies how they affect mental health patients (Tuunanen 2008) and elderly people (Lång in print). In Tampere area Hali-Berni dogs visit adolescent psychiatric department with very severe behavior disturbances (Reini in print). Studies have shown the same type of influence as other studies: positive results were related to behavior and affect, social skills, self-esteem, control and decreases in aggression and hostility especially in children and adolescents (Fine 2000; Kruger and Trachtenberg; Serpell 2004). You all are welcome to meet and feel our Haliberni dogs outside Finlandia Hall. They are waiting for you.

S5-05-S**Dog-assisted interventions with children and adolescents***Ikäheimo, Kaija*

Child Psychiatry, Finland

Dog-Assisted Interventions are presented theoretically in the state of art lecture Dennis Turner: Animal-Assisted Interventions for children and adolescents: What animals mean to them, why and when AAI work, and who should be involved. This is a new and rapidly expanding field in child and adolescent psychiatry. Research and practice in learning situations, in psychotherapy and in voluntary work with children and adolescents are presented in this symposium. In the end of our last presentation all participants of the symposium can meet our dogs and get a better understanding of animal-assisted interventions in practice.

S5-06-1**European Research in Early onset Obsessive compulsive disorder (OCD) and the International College of Obsessive Compulsive Spectrum Disorders (ICOCS). The ICOCS a platform to build research networks on pediatric OCD***Rueck, Christian*

University of Stockholm, Karolinska, Sweden

Christian Rück (Karolinska Institute, Sweden) President of the ICOCS, will introduce the organisation ICOCS which intends to stimulate and aid mental health professionals and others to develop research projects in this field, and to coordinate research efforts amongst members. The ICOCS also intends to increase public health awareness in regard to OCD and OC spectrum disorders with the hope of improving diagnosis and encouraging better deployment of resources for assessment and treatment. A European research consortium for the study of pediatric compulsive disorder has formed to apply for a grant from EU. The initiative of the consortium attempts covers important research questions regarding treatment, neurocognition, brain mechanisms and genetics. Moreover, other aspects of

compulsive behavior in the form of pathological gambling is a focus as well. The studies attempt to find endophenotypes that bridges across these forms of pathology, and to study them in non-symptomatic first degree relatives.

S5-06-2

European Research in early onset obsessive compulsive disorder (OCD) and the International College of Obsessive Compulsive Spectrum Disorders (ICOCS)

Walitza, Susanne

University of Zürich, of Child and Adolescent Psychiatry, Switzerland

Epidemiological data show that 1% of children and 3% of adolescents of the general population suffer from OCD. Children with OCD are often seriously impaired in their development. Research in early onset OCD in Europe is well established in genetics, imaging and neuropsychological and clinical trial studies. However it is desirable to conduct more multicentre studies or replication studies including the different European specialized centres for OCD. The symposium aims to introduce the ICOCS with the actual research topics and to introduce work of different European OCD research groups and bring them together within discussion and in the best way to initiate concerted studies. Christian Rück (Karolinska Institute, Sweden) President of the ICOCS, will introduce the organisation ICOCS which intends to stimulate and aid mental health professionals and others to develop research projects in this field, and to coordinate research efforts amongst members. The ICOCS also intends to increase public health awareness in regard to OCD and OC spectrum disorders with the hope of improving diagnosis and encouraging better deployment of resources for assessment and treatment. Susanne Walitza (Switzerland) will give a brief overview of European pediatric OCD research (sketching the map). The following referents will present studies in OCD regarding their countries and institutes: Isobel Heyman (Maudsley hospital, London); Bernhard Weidle (OCD research in the Nordic countries, including the NordLOTS project; Richard Delorme (Robert Debré Hospital; France); Silvia Brem with Edna Grünblatt (studies on early onset OCD in Switzerland) and Tobias Renner (Germany). At the end Tord Ivarsson (Norway) will conclude remarks-next steps, where are we going?

S5-06-3

European Research in early onset OCD in Italy

Pallanti, Stefano

University of Florence, Italy

Stefano Pallanti (Florence) will give a brief overview on the emerging themes of problematic gaming and internet addiction and their link with the obsessive–compulsive spectrum disorders and other anxiety disorders. Stefano Pallanti will show the efforts being made currently in Italy to improve the recognition and the assessment of these emerging disorders in schools and clinical practice. The aim of this overview is to raise awareness about the new behavioral addictions and their weight in the management of the child or adolescent patient.

S5-06-4

Research on CBT as an effective treatment in pediatric OCD

Heyman, Isobel

Maudsley Hospital, University of London, UK

In the UK as in most countries, there is unequal geographical availability of CBT, and methods of increasing access to CBT for children with OCD need developing. Published pilot data will be presented demonstrating effectiveness of telephone treatment in a case series. The design and progress of a current randomised controlled trial (RCT) of telephone CBT will be discussed. Trials in adults and children have demonstrated that response to CBT may be enhanced and accelerated by the addition of D-cycloserine (DCS), a medication proposed to accelerate desensitisation to the fear associated with exposure to a feared stimulus (the principle of exposure with response prevention, used in CBT for OCD). Design and progress of an RCT of DCS augmented CBT in children and adolescents with OCD will be discussed.

S5-06-5

Research on pediatric OCD in Scandinavia

Weidle, Bernhard

St. Olavs Hospital and Institute for Neuroscience, Child- and Adolescent Psychiatry, Norway

The Nordic Longterm OCD Treatment Study is a platform for pediatric OCD studies in the Nordic countries. The central feature is a treatment “effectiveness study” where Cognitive Behaviour Therapy (CBT) where responders are followed during 3 years and non-responders are randomized to continued CBT or to sertraline. True treatment refractory (to evidence based treatment) cases are studied with regard to an augmenting strategy using aripiprazole. Associated studies range from the genetics of OCD and OCD treatment response to family aspects (accommodation and expressed emotion), quality of Life, and imaging using magnet resonance spectroscopy. Moreover, we study treatment of OCD symptoms in patients with co-morbid Asperger/high functioning autism.

S5-06-6

Research on pediatric OCD in Switzerland

Grünblatt, Edna¹; Brem, Silvia²; Walitza, Susanne³

¹University of Zürich, Switzerland; ²Child and Adolescent Psychiatry, Switzerland; ³Child, Switzerland

A Switzerland study, funded by the Swiss National Science foundation, includes the University clinics of Child and Adolescent Psychiatry and Psychotherapy of Zürich (CAPS), Bern und Basel as well as the Central institute Mannheim/Germany and represents a unique interdisciplinary approach, which will integrate findings from two complementary approaches of functional imaging sensitive to either spatial (fMRI) or temporal processing (EEG) as well as findings from neuropsychology and genetics to determine and contrast specific biomarkers of juvenile OCD and ADHD. A comparison between early onset OCD and late OCD is planned to be studied together with the Department of Psychiatry of the University of Zürich. Together with

other German speaking countries the CAPS investigate in samples of early onset OCD genetic factors with molecular genetic technologies (SNPs, CNVs, genome-wide- and linkage analyses).

S5-06-7

European Research in early onset OCD in Germany

Renner, Tobias

University Würzburg, Child and Adolescent Psychiatry, Germany

A German Multicentre study including the University Clinics of Child and Adolescent Psychiatry, Psychosomatics and Psychotherapy of Würzburg, Aachen, Freiburg and Cologne focussed up to now on molecular genetic studies in case-control samples and also on family studies regarding early onset OCD. Furthermore first prospective follow up studies in German speaking countries have been done at the University Clinic of Child and Adolescent Psychiatry of Würzburg in children with OCD studying the longterm-outcome considering the psychosocial adjustment especially social adaption in education, family and partnership, as well as in spare time.

S5-06-8

Research in pediatric OCD in Amsterdam

Hyser, Chaim

Germany

Abstract text not available.

S5-06-9

Research on pediatric OCD in Europe: where are we going?

Ivarsson, Tord

R.BUP, Psychiatry, Norway

Epidemiological data show that 1% of children and 3% of adolescents of the general population suffer from OCD. Children with OCD are often seriously impaired in their development. Research in early onset OCD in Europe is well established in genetics, imaging and neuropsychological and clinical trial studies. However it is desirable to conduct more multicentre studies or replication studies including the different European specialized centres for OCD. The symposium aims to introduce the ICOCS with the actual research topics and to introduce work of different European OCD research groups and bring them together within discussion and in the best way to initiate concerted studies. Christian Rück (Karolinska Institute, Sweden) President of the ICOCS, will introduce the organisation ICOCS which intends to stimulate and aid mental health professionals and others to develop research projects in this field, and to coordinate research efforts amongst members. The ICOCS also intends to increase public health awareness in regard to

OCD and OC spectrum disorders with the hope of improving diagnosis and encouraging better deployment of resources for assessment and treatment. Susanne Walitza (Switzerland) will give a brief overview of European pediatric OCD research (sketching the map). The following referents will present studies in OCD regarding their countries and institutes: Isobel Heyman (Maudsley Hospital, London); Bernhard Weidle (OCD research in the Nordic countries, including the NordLOTS project); Richard Delorme (Robert Debré Hospital; France); Silvia Brem with Edna Grünblatt (studies on early onset OCD in Switzerland) and Tobias Renner (Germany). At the end Tord Ivarsson (Norway) will conclude remarks-next steps, where are we going?

S5-06-S

European research in early onset obsessive compulsive disorder (OCD) and the International College of Obsessive Compulsive Spectrum Disorders (ICOCS)

Walitza, Susanne¹; Ivarsson, Tord²; Rück, Christian³; Delorme, Richard⁴; Heyman, Isobel⁵; Pallanti, Stefano⁶; Weidle, Bernhard⁷; Renner, Tobias⁸

¹University of Zurich, Dept. of Child and Adolescent Psychiatry, Switzerland; ²OCD/Anxiety Clinic, Department of Child- and Adolescent Psychiatry, Sweden; ³Karolinska Institutet, Department of Clinical Neuroscience, Sweden; ⁴Robert Debré Hospital, Child and Adolescent Psychiatry, France; ⁵University of London, Institute of Psychiatry, King's College London, UK; ⁶Università di Firenze, Institute of Neuroscienze, Firenze, Italy; ⁷-, Norway; ⁸-, Germany

Epidemiological data show that 1% of children and 3% of adolescents of the general population suffer from OCD. Children with OCD are often seriously impaired in their development. Research in early onset OCD in Europe is well established in genetics, imaging and neuropsychological and clinical trial studies. However it is desirable to conduct more multicentre studies or replication studies including the different European specialized centres for OCD. The symposium aims to introduce the ICOCS with the actual research topics and to introduce work of different European OCD research groups and bring them together within discussion and in the best way to initiate concerted studies. Christian Rück (Karolinska Institute, Sweden) President of the ICOCS, will introduce the organisation ICOCS which intends to stimulate and aid mental health professionals and others to develop research projects in this field, and to coordinate research efforts amongst members. The ICOCS also intends to increase public health awareness in regard to OCD and OC spectrum disorders with the hope of improving diagnosis and encouraging better deployment of resources for assessment and treatment. Susanne Walitza (Switzerland) will give a brief overview of European pediatric OCD research (sketching the map). The following referents will present studies in OCD regarding their countries and institutes: Isobel Heyman (Maudsley hospital, London); Else de Haan (Dutch pediatric OCD research); Bernhard Weidle (OCD research in the Nordic countries, including the NordLOTS project); Richard Delorme (Robert Debré Hospital; France); Silvia Brem with Edna Grünblatt (studies on early onset OCD in Switzerland) and Tobias Renner (Germany). At the end Tord Ivarsson (Norway) will conclude remarks-next steps, where are we going?

S5-07-1**Affective information processing in adolescents with conduct disorder: neural and behavioural abnormalities***Stadler, Christina*

University Basel, Department of Child and Adolescent Psychiatry, Switzerland

Background: Theories on the neural basis of pathological aggression emphasize the role of abnormal emotional information processing as an underlying neural mechanism. Such abnormalities could involve both the recognition of emotional cues in the environment and the effects of affective states on the regulation of behaviour. Here we present results from functional neuroimaging and a behavioural study in adolescents with conduct disorder (CD), testing the hypothesis that aggressive behaviour is related to an impairment of cognitive functions under emotional challenge.

Methods: In the neuroimaging study, 13 boys with CD and 14 age-matched healthy controls viewed standardized negative and neutral pictures from the international affective picture system (IAPS) while undergoing functional magnetic resonance imaging (fMRI). In the behavioural study, 24 boys with CD and 24 healthy controls performed a colour word Stroop task that was combined with the presentation of negative and neutral IAPS pictures to test whether the emotional challenge by negative affective information would interfere with Stroop performance.

Results: The fMRI study showed a significant group-by-condition interaction in the right dorsal anterior cingulate cortex that was due to a pronounced deactivation in the patient group during viewing of negative pictures. Moreover there was a negative correlation between aggressive behaviour and responses in the left amygdala to negative affective pictures, whereas a positive correlation was found with symptoms of anxiety and depression. In the behavioural study, CD patients showed impaired cognitive control after presentation of negative affective pictures compared to healthy controls.

Conclusion: These findings provide converging neural and behavioural evidence for deficient cognitive control mechanisms under negative emotional activation as a pathophysiological mechanism underlying aggressive behaviour in adolescents with CD.

S5-07-2**Brain imaging investigations in boys with psychopathic tendencies***De Brito, Stephane*

University College London, UK

Background: Brain imaging work on adult populations suggests that psychopathy is characterized by structural and functional brain abnormalities in frontal-temporal neural circuit critical for emotional processing and moral reasoning. Theoretical accounts of psychopathy suggest that it is a neurodevelopmental disorder. Consistent with this hypothesis, we have recently found that boys with psychopathic tendencies (conduct problems coupled with callous-unemotional traits), compared with typically developing boys, had increased grey matter concentration (GMC), possibly indicative of aberrant brain maturation. Using the same sample, we report here the results of the first structural magnetic resonance imaging study examining white matter integrity in boys with psychopathic tendencies.

Methods: The present study used voxel-based morphometry (VBM) to compare whole white matter concentrations of boys with psychopathic tendencies and typically developing boys. sMRI scans were collected from 23 boys with psychopathic tendencies and 25 typically developing boys selected from a community sample of children. White matter concentration was examined controlling for cognitive ability and hyperactivity-inattention symptoms.

Results: Compared with the typically developing boys, boys with psychopathic tendencies exhibited decreased WMC in several brain areas where we had previously reported increased GMC for boys with psychopathic tendencies: in the right superior frontal lobe, right dorsal anterior cingulate, right superior temporal gyrus, and left precuneus. Contrary to predictions, boys with psychopathic tendencies also exhibited increased WMC bilaterally in the middle frontal gyrus, an area that was not implicated at the chosen statistical threshold in our earlier paper.

Conclusion: The finding of decreased WMC in boys with psychopathic tendencies is in line with the view that psychopathy is characterised by atypical neural structure even in childhood.

S5-07-3**Economic consequences caused by adolescents with a diagnosis of conduct disorder: a health-economic analysis from third party payers perspective***Bachmann, Christian*

Charité-University Hospital Berlin, Department of Child and Adolescent Psychiatry, Germany

Background: The aim of this cross-sectional study was to evaluate the annual statutory health insurance expenditures caused by adolescents with a diagnosis of conduct disorder in comparison to adolescents without such a diagnosis.

Methods: Our study is based on a retrospective secondary billing data analysis from 2006 of a leading German health insurance company (AOK Berlin-Brandenburg). From this database, we extracted all adolescent patients (age 13–18 years) with a documented ICD-10 diagnosis of conduct disorders (F90.1, F91.0, F91.1, F91.2, F91.3, F91.8, F91.9, F92.0, F92.8, F92.9), who formed the index group (IG). Consecutively, a control group (CG) with similar age- and gender-distribution was randomly drawn from the data set. The expenditures in both groups were compared using Mann–Whitney-U-test.

Results: A total of 665 adolescents had a diagnosis of conduct disorder (IG). According to the age- and gender-distribution observed in the IG, 26,502 individuals were randomly allocated to the CG. There was a significant ($p < 0.001$) difference in mean annual expenditures between both groups. Within the CG, the mean annual health-care costs were 735 [$\pm 4,844$] €, while the IG caused annual costs that were 3.5 times higher (2,632 [$\pm 5,592$] €). A further analysis stratified by gender produced significant results ($p < 0.0015$): In both groups, females caused significantly higher costs (IG: 2,883 [$\pm 3,990$] €, CG: 830 [$\pm 2,133$] €) than males (IG: 2,501 [$\pm 6,272$] €, CG: 679 [$\pm 5,881$] €).

Conclusion: From the perspective of a German statutory health insurance company, adolescents with a diagnosis of conduct disorder caused significantly higher costs than adolescents without this diagnosis. To evaluate the reasons for these group differences, a further analysis of potential influencing factors (e.g. age, comorbidity, sociodemographic factors) may prove helpful.

S5-07-4**The importance of anxiety for the etiology of aggressive behavior**

*Vloet, Timo*¹; *von Polier, Georg*¹; *Matthias, Kristine Matthias*¹; *Konrad, Kerstin*²; *Herpertz-Dahlmann, Beate*¹

¹RWTH, University Hospital Aachen, Department of Child and Adolescent Psychiatry, Germany; ²RWTH, University Hospital Aachen, Child Neuropsychology Section, Department of Child, Germany

Background: Aggressiveness constitutes a key symptom in conduct disordered children. In clinical practice two different subtypes of aggressive behavior i.e. the proactive and reactive subtype are distinguished. The impact of psychometric properties on the occurrence of these subtypes of aggressive behavior in childhood and adolescence is still unclear. The aim of the present study is a detailed psychometric and neurobiological characterization of children with the early subtype of conduct disorder (CD, according DSM-IV).

Methods: 42 children with CD aged 7–16 years and 38 age- and IQ-matched healthy controls participated in the study. The psychometric data comprised trait anxiety, subtype of aggressive behavior and psychopathic traits. Furthermore, parameters of the neuroendocrine and autonomic stress system were assessed.

Results: There was a positive correlation between trait anxiety, reactive aggression and the activity of the neuroendocrine stress system. On the other hand children with reduced trait anxiety were characterized by reduced neuroendocrine and autonomic activity and increased psychopathic traits.

Conclusion: We assume that anxiety might constitute an essential modulating factor which influences the relative predominance of subtypes of aggressive behaviour: psychometric and neurobiological profiles might help to disentangle the heterogeneous symptomatology and developmental course of children with CD and possibly improve current therapeutic opportunities.

S5-07-S**Neurobiological, psychopathological and health-economic aspects of conduct disorder**

*Vloet, Timo*¹; *Bachmann, Christian*²

¹RWTH, University Hospital Aachen, Germany; ²Charité-University Hospital Berlin, Department of Child and Adolescent Psychiatry, Germany

In this prearranged symposium we would like to present current findings on conduct disorder. We present neurobiological (s and fMRI, neuro-psychological and neuroendocrine) as well as psychopathological and health-economic findings of children with conduct disorder. Referents and topics are (1) Affective Information Processing in Adolescents with Conduct Disorder: Neural and Behavioural Abnormalities Christina Stadler, (2) brain imaging investigations in boys with psychopathic tendencies Stéphane A De Brito, Eamon J. P. McCrory, Andrea Mechelli, Marko Wilke, Alice P. Jones, Sheilagh Hodgins, and Essi Viding, (3) economic consequences caused by adolescents with a diagnosis of conduct disorder—a health-economic analysis from third party payers perspective Christian Bachmann, Franziska Ewest, Volker Wenning, and Thomas Reinhold, (4) the importance of anxiety for the etiology of aggressive behavior Timo D. Vloet, Georg von Polier, Kristine Matthias, Kerstin Konrad, and Beate Herpertz-Dahlmann

S5-08-1**Persistence of bullying behaviours in middle adolescence**

*Fröjd, Sari*¹; *Marttunen, Mauri*²; *Kaltiala-Heino, Riittakerttu*¹

¹University of Tampere, Finland; ²University of Helsinki, Finland

Background: Parents and teachers often suggest changing schools as a means for stopping the bullying behaviours.

Aim: Persistence of bullying behaviours in middle adolescent boys and girls after changing schools is studied.

Materials and methods: T1: A school-based survey was conducted in 2002–2003 inviting all ninth grade students (aged 15–16 years) in Tampere and Vantaa. T2: Students in the final sample of the baseline survey (N = 3278, response rate 94%) were invited to complete a follow-up survey 2 years later (N = 2070, response rate 63%). All respondents had completed comprehensive education between T1 and T2. The respondents were asked how frequently they had been bullied during the ongoing school term, and how often they had bullied others. The response alternatives were “many times a week”, “about once a week”, “2–3 times a month”, “once or twice” and “not at all”. A dichotomous variable measuring involvement in bullying behaviours was computed: victim/bully/bully-victim/not involved (0 = “once or twice” or “not at all”; 1 = at least 2–3 times a month).

Results: Involvement in bullying was more common among boys than among girls at both times ($p < 0.001$). Of the 15 to 16-year-old boys 5% (of the girls 4%) reported bullying others, and 5% (of the girls 1%) reported being a victim of bullying; 2% (of the girls 0.5%) reported being bully-victims. Being involved in bullying behaviours became less common over time. Of the 15 to 16-year-old male victims 19% (of the female victims 5%) were still victimised 2 years later. Of the male bullies 18% (of the female bullies 0%) persisted to bully. Of the male bully-victims 13% (of the female bullies 17%) persisted to bully others and also to be victims of bullying.

Conclusions: Bullying behaviours showed persistence over time even though the adolescents had changed schools. Persistence of bullying behaviours was stronger for boys than for girls. Persistence of being a bully-victim was higher among girls, however.

S5-08-2**Involvement in bullying and depression in adolescents**

*Kaltiala-Heino, Riittakerttu*¹; *Marttunen, Mauri*²; *Fröjd, Sari*³

¹University of Tampere, Medical School, Finland; ²National Institute for Health and Welfare, Finland; ³University of Tampere, Finland

Aim(s): Literature concerning involvement in bullying and depression in adolescence is reviewed and analyses are presented of a longitudinal study among Finnish adolescents.

Methods: A 2-year follow-up study among 15 adolescents aged 15 in the baseline. Self-reported depression and involvement in bullying as a bully and a victim are studied. Cross-sectional associations were tested with cross-tabulation and χ^2 statistics, and longitudinal analyses were performed with logistic regression.

Results: Literature has repeatedly revealed an association between being a victim to bullying and depression, but causal relationships remain unclear. Depression is also more prevalent among bullies than among those not involved, even if this finding has also been challenged in some studies. In our own study both being a victim to bullying and being a bully predicted later depression among boys.

Among girls, depression at T1 predicted victimisation at T2. Depression at T1 predicted experience of being left alone at T2 among both sexes.

Conclusion: Victimisation to bullying may be a traumatising event that results in depression. However, depression also predicts experience of victimisation and of being left alone against one's wishes. Depression may impair and adolescent's social skills and self-esteem so that the adolescent becomes victimised by peers. However, depression may also distort and adolescent's experiences of social interactions.

S5-08-3

The copycat-phenomenon after two Finnish school shootings: an adolescent psychiatric perspective

Lindberg, Nina

Helsinki University Central Hospital, Department of Adolescent Psychiatry, Finland

Background: Two school shootings took place in Finland in 7.11.2007 and 23.9.2008. Homicides are associated with copycat-phenomenon. This happened also in Finland, and some of the threats of massacre were estimated to be so serious that the youngsters were sent to adolescents psychiatric evaluation.

Materials and methods: The study was nationwide and the subjects of the study were 13 to 18-year-old adolescents who were sent to adolescent psychiatric evaluations during 8.11.2007–30.6.2009, one of the reasons for evaluation being a threat of massacre. Information of the study were sent both by e-mail and post to all doctors in chief in the field of adolescent psychiatry in Finland. They were asked to go through the referrals of the above mentioned time and to send the information of the patients with massacre threats to the researchers. The researchers studied the files of the patients and collected the variables. Individual patients were not met. The Structured Assessment of Violence Risk in Youth (SAVRY) was used to assess the violence risk. The Psychopathy Checklist Youth Version (PCL:YV) was used to assess psychopathic traits. Both the SAVRY and the PCL:YV ratings were based on file information.

Results: Most of the youngsters with copy-cat threats of massacre were boys in their early adolescence. One third of the subjects had a history of previous treatment either in the field of child psychiatry or adolescent psychiatry. One third had a history of previous criminality. The most frequent current psychiatric diagnoses were conduct disorders, specific developmental disorders of speech and language and of scholastic skills as well as depressive disorders. Over half of the sample had a subjective feeling of being a victim of bullying at school. The subjects did not show very much psychopathic traits.

S5-08-4

Mental health among survivors of Jokela and Kauhajoki school massacres

Haravuori, Henna¹; Suomalainen, Laura¹; Marttunen, Mauri²

¹National Institute for Health and Welfare and Helsinki University Central Hospital, Finland; ²National Institute for Health and Welfare, University of Helsinki and Helsinki University Central Hospital, Finland

Background: There have been two school shooting tragedies in Finland the past few years. The first occurred in Jokela High School November 2007 with eight victims. Jokela High School is a public secondary school (students 13–19 years). The second occurred in Kauhajoki September 2008 with ten victims. The educational institution in Kauhajoki is a combination of Seinäjoki University of Applied Sciences and Vocational Education Centre Sedu. The students come from several communities and are older than in Jokela (15–25 years with some mature students). We present results from a controlled follow-up study which aims to evaluate the long term effects of traumatising in adolescents and young adults.

Methods: The data were collected using a questionnaire answered by students of the exposed schools and students of the comparison schools 4 months after the shootings. The questionnaires were replicated 1 year later. The Impact of Event Scale (IES) was used to assess the posttraumatic distress and the General Health Questionnaire (GHQ-12) general psychological symptoms. Quality of life was measured by five questions from the WHOQOL.

Results: Approximately 30–40% of the exposed students exhibited psychic symptoms at 4 months. One-fifth suffered from probable posttraumatic stress disorder. The proportion of the students having symptoms decreased during the follow-up period, yet symptomatic proportion remained larger than in comparisons. Severity of exposure was associated with higher rates of symptomatology through follow-up. 27% of the Jokela and 25% of the Kauhajoki students had received treatment. Quality of life and personal relations were not affected by the exposure while the exposed were less satisfied with their energy for everyday life at 4 months.

Conclusions: A significant proportion of students exposed to a school shooting have persistent posttraumatic symptoms. A challenge is to provide long enough aftercare with feasible access to treatment.

S5-08-S

Violence in schools

Kaltiala-Heino, Riittakerttu¹; Lindberg, Nina²

¹University of Tampere, Medical School, Finland; ²Helsinki University Hospital, Department of Adolescent Psychiatry, Finland

Chairs: Nina Lindberg and Riittakerttu Kaltiala-Heino Sari Fröjd: Persistence of bullying behaviours in middle adolescence Riittakerttu Kaltiala-Heino: Involvement in bullying and depression in adolescents Nina Lindberg: Adolescents who threaten school massacre Henna Haravuori: Mental health among survivors of Jokela and Kauhajoki school massacres This symposium gathers together research around bullying and violence in schools. Sari Fröjd, MSc, PhD opens the topic by analysing persistence of involvement in bullying and roles in school bullying in a Finnish adolescent population sample. Researching has suggested persistence of involvement in bullying in school children, but little is known about the topic in middle adolescence, a period when peer relationships are developmentally particularly important. Riittakerttu Kaltiala-Heino, MD, PhD shall present results on mental disorders among bullies and victims among adolescent population and clinically referred adolescents. Novel information is provided in prospective follow-up design and among patient samples. Nina Lindberg, MD, PhD, discusses results of a unique study comprising adolescents who were brought to adolescent psychiatric services after having expressed threats of school massacre. After two school massacres, numerous threat situations were handled by adolescent psychiatric services in Finland, and the data allows interesting insights to psychiatric associations of threats of targeted violence.

Finally, Henna Haravuori, MD, PhD, presents results of the follow-up study of the students exposed to the two school shootings in Finland. Long term consequences of exposure to mental health and on life quality are reviewed. Risk and protective factors for post-traumatic reactions and practical remarks are discussed.

S5-09-1

The family members' experiences of the family talk intervention

Pihkala, Heljä¹; Cederström, Anita²; Sandlund, Mikael³

¹Skellefteå Hospital, Psychiatric Clinic, Sweden; ²University of Örebro, Sweden; ³University of Umeå, Sweden

Background: A recent modernization of the legislation in Sweden obligates the professionals in health services to observe the needs of the children and their families when a patient who is a parent suffers from a serious illness. Family talk intervention (FTI, called Beardslee's family intervention in Sweden) is the first family-based and structured method used in psychiatric services in Sweden for the group children of parents with mental illness. The presentation sums up results from three studies on families' experiences of the FTI.

Aims: The aims of the studies were to examine the process of the FTI from the perspective of the parents and children and to investigate the FTI:s perceived impact for the family members in naturalistic settings.

Materials and methods: Ten parents with a diagnosis of depression were interviewed about their process of deciding to participate in a FTI. Seventeen parents with a psychiatric diagnosis and eight other parents were interviewed about their experiences of the FTI as well 14 children. Qualitative methods were used in the analysis of the data.

Results: Parenthood and the children's well-being were delicate issues for many parents with mental illness. In the further process the parents' confidence and security in the professionals and in the FTI as a method were prerequisites for initiating communication about the parents' mental illness with the children. The majority of the parents experienced decreased feelings of shame and guilt and felt reassured as parents as an impact of the FTI. The children described a sense of relief and release from worry about the parents' illness.

Conclusions: To deal with the issue of parenthood is demanding for the parents with mental illness and also for the professionals. The FTI:s perceived impact is positive according the interviewed family members' experiences.

S5-09-2

Impact of preventive interventions on children's symptoms, when parent is in treatment for depression

Solantaus, Tytti¹; Paavonen, Juulia¹; Mantere, Outi²; Toikka, Sini³; Punamäki, Raija-Leena⁴

¹National Institute for Health and Welfare, Child and Adolescent Mental Health, Finland; ²National Institute for Health and Welfare, Finland; ³Finland's Slot Machine Association, Finland; ⁴Helsinki University, Helsinki Collegium for Advanced Studies, Finland

Introduction: Parental depression increases risk for psychiatric morbidity in offspring. This paper presents results of preventive interventions carried out in the psychiatric services treating the

parent, with the aim of supporting child development. The aim of the interventions is to interfere in the generational cycle of psychiatric problems. We will report findings on the intervention impact on children's symptoms, probe deeper into the interrelationship between parent and child depressive symptoms over the 18-month follow up period and document children's intervention experiences.

Methods: Parents in treatment for depression were randomised with their families (n = 119) to two intervention groups, one being a discussion about children with 1 or 2 sessions and the other Family Talk Intervention with 6–8 sessions involving the whole family. Mothers, fathers and their children aged 8–16 were informants in the questionnaire based study. The sample was followed at 4, 10 and 18 months. The Strengths and Difficulties Questionnaire and the Beck Depression Inventory were used to measure child and parent symptoms. Children's experiences were studied by tailored questions.

Results: Both interventions were safe and feasible, and had a positive impact on parent reported children's symptoms and their prosocial behavior, the Family Talk Intervention being superior in emotional symptoms. Children did not report changes in their symptom levels. Analysis of possible changes in the strengths of the relationship between parental and child symptoms over time is under way.

Discussion: The study suggests that the methods are suitable and effective to be used in health services for adults. The differences between parent and child reports are discussed.

Reference: Solantaus et al. Preventive interventions in families with parental depression: Children's psychosocial symptoms and prosocial behaviour. *Eur Child Adolesc Psychiatry* (2010) 19:883–892

S5-09-3

The effectiveness of preventive interventions to change cognitive attributions in children of depressed parents

Punamäki, Raija-Leena¹; Paavonen, Juulia²; Toikka, Sini³; Solantaus, Tytti²

¹University of Helsinki, Helsinki Collegium for Advanced Studies, Finland; ²National Institute of Health and Welfare, Child and Adolescent Mental Health, Finland; ³Finland's Slot Machine Association, Finland

Background: According to the cognitive vulnerability models of depression, dysfunctional cognitive style increases the likelihood of depression among adults and children especially at high risk and stress. Children with dysfunctional attribution style tend to interpret failures as their own fault and unchangeable, and perceive positive events as exceptional and caused by external forces. Children of depressive parents show more dysfunctional and negative causal attributions than those in intact families, placing them into a heightened risk for transgenerational depression. It is crucial to help the children of depressive parents to maintain functional causal attributions.

Aims: First, we examine, whether preventive interventions can increase positive and decrease negative causal attributions in children whose parent/s have mood disorder. The compared interventions are the Family Talk Intervention (FTI) and a psychoeducational discussion with parents (Let's Talk about Children, LT). Second, whether positive changes in attributions contribute to children's good mental health.

Methods: Participants were 119 Finnish families with 145 children (8–16 years), in which at least one parent was in treatment for mood disorder. Families were randomized either to the FTI or LT. Children reported causal attributions (CASQ-R), and both parents and children reported child depressive (CDI) and psychiatric symptoms (SDQ) at

baseline (T1), 10 months after intervention (T2) and 19 months follow-up (T3).

Results: An increase of positive causal attributions was found in LT, but not in the FTI from T1 to T3. No general or intervention-specific changes were found on negative attributions. Increase in functional causal attributes correlated with good child mental health.

Conclusion: Dysfunctional cognitive style emerges early in development and forms a severe mental health risk. Family preventions are encouraging in hindering their negative impacts.

S5-09-4

Structured child-centered interventions for families of a parent, who suffers from cancer

Niemelä, Mika¹; Solantaus, Tytti¹; Hakko, Helinä²; Räsänen, Sami²

¹National Institute for Health and Welfare, Child and Adolescent Mental Health, Finland; ²Oulu University Hospital, Finland

Systematic research on family support and prevention of children's problems in families with parental cancer is fairly scanty. However, various kinds of recommendations on how to provide psychosocial support for children living with a parent suffering from cancer have been published. Professionals in health care are recommended to carry out discussions for the parents concerning children and parenthood in the changed family situation, but these have rarely resulted in studies on impact of these interventions on families, parents and children. This presentation sums current state of published research on structured preventive interventions targeted at children and families with a parent suffering from cancer. In addition, the ongoing research programme. *Struggle for life: a preventive intervention trial in families with parental life-threatening illness*, is described. The study is carried out in three cancer clinics in central hospitals in Finland. Two interventions, a brief discussion with parents and a family intervention, are compared in a randomized setting with practice as usual. The data collection still continues, but as the first stage in the study protocol, it was ascertained that the interventions and the discussions on cancer within the family do not increase parents' and children's worries, fears and insecurity. The results suggest that the interventions are safe and feasible as reported by family members and they are well received in cancer care also by practitioners. Preliminary reports concerning family members' perceived benefits are also reported.

S5-09-S

Children of parents with health problems: family experiences and effectiveness of preventive interventions in health services for adults

Pihkala, Heljä¹; Solantaus, Tytti²; Punamäki, Raija-Leena³; Niemelä, Mika²

¹Skellefteå Hospital, Psychiatric clinic, Sweden; ²National Institution for Health and Welfare, Child and adolescent mental health, Finland; ³University of Helsinki, Helsinki Collegium for Advanced Studies, Finland

Parental mental health problems and severe somatic illness create stress for parents and increase children's risks for psychiatric problems. Health services for adults are in a position to initiate support for the families and children. This has been recognized in 2011 by

legislators in Finland, Norway and Sweden, where health services for adults are now obliged to respond to children's needs when parents are in treatment. There is an urgent need for preventive interventions that are safe, feasible and effective in services for adults; this is the aim of our symposium.

The symposium comprises four presentations:

1. Pihkala (Family members' experiences of the Family Talk Intervention) sums up the results of three Swedish studies on initiating a discussion on children with the patient and carrying out a family intervention.
2. Solantaus (Impact of preventive interventions on children's symptoms, when parent is in treatment for depression) summarises findings from a randomized controlled trial comparing two interventions, the Family Talk intervention and a brief discussion about children with the parent (N = 119). The interventions have a positive impact on children's symptoms; further analysis on the associations of parental and child depressive symptoms over the 18 month follow up will be presented.
3. Punamäki (The effectiveness of preventive interventions to change cognitive attributions in children of depressed parents) analyses children's cognitive attributions as possible underlying mechanisms contributing to the Family Talk Intervention (FTI) effectiveness.
4. Niemelä "Structured child-centered interventions for families of a parent, who suffers from cancer" presents an overview of research and findings from preventive interventions for families with parental cancer. The preliminary results show that the interventions are safe and feasible and well received in cancer care.

S5-10-1

Pan-European initiatives for the study of the genetics of Tourette Syndrome

Paschou, Peristera¹; Rizzo, Renata²

¹Democritus University of Thrace, Department of Molecular Biology and Genetics, Greece; ²Catania University, Italy

Gilles de la Tourette Syndrome (GTS) is an inherited neuropsychiatric disorder with childhood onset. It is marked by multiple motor and vocal tics and high comorbidity rates with attention deficit hyperactivity disorder and obsessive compulsive disorder. Due to lack in education of medical professionals, educators, and the general public, GTS is underdiagnosed and patients are severely discriminated against. Efforts to elucidate the genetic etiology of GTS have so far been fragmented across Europe and hampered by low statistical power. The Tourette Syndrome Genetics Southern and Eastern Europe Initiative (TSGeneSEE) is a network of seven countries that have established a common biobank of samples for the study of GTS. This initiative led to the creation of the COST Action "European Network for the Study of Gilles de la Tourette Syndrome" (EUNetGTS). Already, 14 countries from across Europe participate in this Action and an open call for additional participations has been published. EUNetGTS is funded by the European COST Office and aims to foster the creation of a pan-European, interdisciplinary scientific network with a goal to promote the study of GTS, improve the standards of care, and educate the public and professionals, combating stigmatisation. This network is also connected to parallel initiatives in the US and around the world, such as, the GTS Genomewide Association Study Replication Initiative (GGRI), that aims to bring together investigators from North and South America,

Europe, and Asia, under the common flag of elucidating the genetic etiology of GTS. The integration of these international activities into one global initiative and the coordination of national projects into a large-scale effort will bring us closer to uncovering the genetic basis of GTS and disentangling the interplay between environment and genetics.

S5-10-2

Does Tourette syndrome prevent from tardive dyskinesia?

Müller-Vahl, Kirsten¹; Schaefer, Deborah²

¹Hannover Medical School, Clinic for Psychiatry, Socialpsychiatry and Psycho, Germany; ²Hannover Medical School, Germany

Background: In patients with Tourette syndrome (TS) neuroleptics (NL) are the most effective drugs for the treatment of tics. However, due to concern about NL-induced tardive dyskinesia (TD) in many cases less effective drugs are used. The aim of this study was to investigate the annualized TD incidence in a large sample of TS patients.

Methods: 917 outpatients attending our department (1988–2009) were interviewed and investigated by one of the authors (KMV). In patients with an NL treatment duration >1 year, the annualized TD rate (in consideration of patients' age and kind of NL [first generation antipsychotics (FGA) vs. second generation antipsychotics (SGA)]) was calculated and compared with data given in a recent meta-analysis (Correll and Schenk 2008).

Findings: Of 521 patients ever treated with NL, 250 (male = 201, female = 49, mean age = 22.6 + 11.7 years) were treated for at least 1 year [FGA: 70 (7.6%), SGA: 201 (21.9%), both: 21 (2.3%)]. None of the 521 patients ever developed TD. In adults (>18 < 60 years, n = 140) the annualized TD rate was significantly reduced for both SGA (0 vs. 2.98%, p = 0.040) and FGA (0 vs. 7.7%, p = 0.018) compared to a general psychiatric population. In minors (<18 years, n = 100) p-values did not reach significance due to the relatively small sample size, although no child developed TD.

Interpretation: This is the first study investigating the annualized TD rate in a large sample of TS patients. Our results suggest that in TS the incidence of NL-induced TD is lower compared to other psychiatric populations. We hypothesize that the dopaminergic overactivity underlying TS protects from TD. Our findings have enormous clinical implications since in patients with TS it is no longer reasonable to restrict NL treatment when indicated due to concern of TD.

Reference:

1. Correll CU, Schenk EM. Tardive dyskinesia and new antipsychotics. *Curr Opin Psychiatry*. 2008 März; 21(2):151–156

S5-10-3

Motor deficits in children and adolescents with Tourette Syndrome

Ludolph, Andrea; Mellina, Linda

University of Ulm, Germany

Background: Tourette Syndrome (TS) is a neuropsychiatric disorder with the clinical hallmarks chronic motor and vocal tics.

The most common comorbidities are ADHD, obsessive compulsive disorders and affective disorders. Motor deficits in TS, especially fine-motor skill deficits are discussed as a possible predictor of future tic severity and global psychosocial function in children with TS.

Aim: To investigate a clinical population of children and adolescents with TS or chronic tic disorders with regard to motor deficits.

Methods: We conducted a retrospective chart review of 176 youth with TS (84 boys) and chronic tic disorders (72 boys) who were outpatients at our institution in the years 2002–2010. The results of the routine clinical neurological examination were evaluated.

Results: A third of the 176 patients showed motor abnormalities. In all patient groups (TS, chronic vocal tic disorder and chronic motor tic disorder), boys were more than twice as often affected than girls. The patients with a chronic tic disorder and a comorbid ADHD were significantly more often affected than without this comorbidity.

Conclusions: Deficits in fine motor skills and coordination occur much more often in patients with TS if a comorbid ADHD is present.

S5-10-S

European Research of Tourette Syndrome in the life span

Ludolph, Andrea¹; Paschou, Peristera²; Müller-Vahl, Kirsten³

¹University of Ulm, Dep of Child and Adolescent Psychiatry, Germany; ²Democritus University of Thrace, Dept. of Molecular Biology and Genetics, Greece; ³Hannover Medical School, Clinic for Psychiatry, Socialpsychiatry and Psycho, Germany

This symposium will present not only clinical studies of Tourette Syndrome (TS) but also the development of several European research activities. Peristera Paschou, Assistant Professor of Population Genetics at the Department of Molecular Biology and Genetics, Democritus University of Thrace, Alexandroupoli, Greece, will present the Pan-European Initiatives for the Study of the Genetics of TS. The Tourette Syndrome Genetics Southern and Eastern Europe Initiative (TSGeneSEE) is a network of seven countries that have established a common biobank of samples for the study of GTS. This initiative led to the creation of the COST Action “European Network for the Study of Gilles de la Tourette Syndrome” (EUNetGTS). Already, 14 countries from across Europe participate in this action. Kirsten Müller-Vahl, Professor of Psychiatry, Clinic for Psychiatry, Socialpsychiatry and Psychotherapy at the Hannover Medical School in Germany will present data about a longitudinal psychopharmacological study and titled her talk “Does Tourette syndrome prevent from tardive dyskinesia?” In a large sample of 917 TS patients treated in the years 1988–2009 with neuroleptic (NL) medication she investigated the prevalence of NL-induced tardive dyskinesia (TD). Her results suggest that in TS the incidence of NL-induced TD is lower compared to other psychiatric populations. Andrea Ludolph, Director of the outpatient clinic at the Department of Child and Adolescent Psychiatry, University of Ulm, Germany, was interested in motor deficits in children and adolescents with chronic tic disorders or TS. A retrospective chart review of 176 youths (aged 6–18 years) revealed a significantly higher prevalence of motor deficits in males than in females. Patients with a comorbid ADHD were much more often affected. In the future, the joint effort of European researchers in the recently founded pan-European, interdisciplinary scientific networks will create studies with even larger samples of TS patients.

S5-11-1 Methods to support families and child development in multisectoral settings: A promotive assessment of children leading to structured networking

Niemelä, Mika; Solantaus, Tytti; Sipilä, Marianne

National Institute for Health and Welfare, Child and Adolescent Psychiatry, Finland

Stressors that affect parents have consequences for family life, parenting and child well-being and development. Parental mental and somatic illness, substance use, unemployment and poverty often create a vicious cycle and the families need support from many different service sectors. Our contribution in the Treatment Planning workshop is (1) to describe methods that are used to support these families in primary services and (2) to apply these methods in the cases that are discussed. The Let's Talk about the Children—discussion includes a promotive assessment of the children. This means identifying, with parents, the strengths and vulnerabilities that the child and the family have, and working out means to support the strengths and help the child and family in their vulnerabilities. The structured network method (ECandF—network) brings the family and their own social network and the professional network across sectors together to support the child. The Let's Talk—discussion has been studied and found safe, feasible and effective. The clinical experience of the ECandF—network method has been very positive, and there is a randomized controlled study going on concerning its safety, feasibility and effectiveness.

S5-11-2 Task shifting and dissemination of an evidence-based intervention for childhood behavioral problems in a developing country

Fayyad, John¹; Farah, Lynn²; Cassir, Youmna³; Salamoun, Mariana²; Karam, Elie G¹

¹Balamand University Faculty of Medicine, Psychiatry and Clinical Psychology, Lebanon; ²Institute for Development, Research, Advocacy and Applied Care (IDRAAC), Lebanon; ³St George Hospital University Medical Center, Psychiatry and Clinical Psychology, Lebanon

Objectives: Task shifting involves the redistribution of available community resources. This project describes the dissemination of an evidence-based parenting skills intervention by training social and health workers with little or no mental health background so they themselves train mothers of children with behavioral problems in impoverished communities in a developing country.

Methods: The Strengths and Difficulties Questionnaire (SDQ) was completed by mothers to screen for children with behavioral problems and was repeated at the end of the intervention. Pre- and post-tests of parenting attitudes were administered to mothers. Workers in social development centers and dispensaries were trained and each social and health worker in turn trained mothers of children with behavioral problems under supervision utilizing an Arabic adaptation of the Treatment Manual for Externalizing Disorders “Helping Challenging Children” developed by the Integrated Services Taskforce of the World Psychiatric Association Child Mental Health Presidential Programme.

Results: A total of 20 workers and 87 mothers were trained. The proportion of children who obtained an SDQ total difficulties score in the abnormal range decreased from 54.4 to 19.7% after the training. Whereas 40.2% of mothers used severe corporal punishment with their children before the intervention, this decreased to 6.1% post-intervention. Three-fourths of mothers related that the program helped them develop new parenting skills.

Conclusion: This pilot project demonstrated the feasibility of task shifting and dissemination of a manual based intervention by training of workers who have little background in mental health to offer effective services to families in impoverished communities who otherwise would not have received them. Successful replication in other developing countries would pave the way to incorporating such programs in national policies given their potential sustainability and cost-effectiveness.

S5-11-S Treatment planning: do not get caught in categorical diagnoses!

Harper, Gordon¹; Niemelä, Mika²

¹Harvard Medical School, Department of Psychiatry, USA; ²Institute for Health and Welfare, Finland

Categorical diagnoses, while useful for descriptive studies and epidemiology, do not suffice for treatment planning. In this workshop, an alternative approach, focal treatment planning, is presented. This method identifies, in ordinary language, the problem requiring care, the contributing and intervenable factors, and spells out a recovery-based future vision. Dr Harper will present the ways that focal treatment planning can be used in clinical work and systems of care. Dr Mika Niemelä will report what it takes to effect inter-sectoral collaboration in Finland. Workshop participants will develop a plan for an actual case.

M2-01-1 Working memory in autism

Rahko, Jukka¹; Nikkinen, Juha²; Carlson, Synnove³; Moilanen, Irma¹; Kiviniemi, Vesa²; Vuontela, Virve⁴

¹Oulu University Hospital, Child Psychiatry, Finland; ²Oulu University Hospital, Diagnostic Radiology, Finland; ³University of Helsinki, Brain Research Unit, Aalto University, Finland; ⁴University of Helsinki, Neuroscience Unit, Institute of Biomedicine, Finland

Background: Impaired WM performance in patients with autistic spectrum disorders (ASD) has been related to deficits in executive functions. ASD adults show abnormal WM in the dorsolateral prefrontal and dorsal anterior cingulate cortices (1). Impairments in frontal circuitry and its connectivity have been associated with ASD (2). Currently there are no reports of neural correlates supporting WM in ASD children.

Aims: We hypothesized that the pattern of activation in ASD children may differ from that reported in adults due to development-related issues. Since WM circuitry also undergoes considerable refinements during development (3), we expected to find differences between control and ASD children in the neural networks supporting WM.

Materials and methods: 28 ASD children and adolescents (aged 11–17) and age and gender matched controls were studied with functional magnetic resonance imaging (fMRI) with a 1.5 T magnet. We used a visuospatial n-back task with two load levels (0- and 2-back) during fMRI to investigate memory load-related distribution of activation in the brain.

Results: Response speed and errors were not significantly different between ASD and control children but ASD children made more multiple responses in the 2-back task. The fMRI data showed that the core WM network was recruited in both groups. Memory load-related activation in the right insular, M1/S1, parietal and temporal regions was stronger in ASD than control children.

Conclusions: Stronger M1/S1 activation may be due to the multiple responses in ASD children and parietal activation to greater effort in visuospatial attentional processing. The higher insular activity in ASD compared to controls is in line with the suggestion that insula is a core region of ASD abnormality (4).

References:

1. Di Martino et al. (2010) *Biol Psychiatry* 65:63–74
2. Koshino et al. (2008) *Cereb Cortex* 18:289–300
3. Luna et al. (2010) *Brain Cogn* 72:101–113
4. Uddin, Menon (2009) *Neurosci Biobehav Rev* 33:1198–203

M2-01-2

Valence scaling of dynamic facial expressions altered in high-functioning ASD: an f-MRI study

Rahko, Jukka¹; Nikkinen, Juha²; Kätsyri, Jari³; Sams, Mikko³; Moilanen, Irma⁴; Kiviniemi, Vesa²; Nummenmaa, Lauri³

¹Oulu University Hospital, Finland; ²Oulu University Hospital, Diagnostic Radiology, Finland; ³Aalto University, Brain Research Unit, Low Temperature Lab., Finland; ⁴Oulu University Hospital, Child Psychiatry, Finland

Background: Problems in recognizing facial expressions are one of the core features of in ASDs. Two expectations were tested: whether viewing dynamic facial expressions reveals differences in automated valence scaling between subjects with ASDs and TD controls; and whether deactivation explains some of the hypothesized differences.

Materials and methods: We studied 25 adolescent ASD cases and 25 age and gender matched controls was assessed with multiple tests (DSM-IV). The subjects were screened using ADOS, ADI-R, ASSQ and Kiddies-Sads screens. Resting and activation scans were imaged with GE 1.5 T, ASSET × 2, TR 1800 ms, TE 40 ms, flip angle 90, 64 × 64 matrix, FOV 25.6 cm, 28 4 mm slices. fMRI was performed with dynamic facial expressions fear and happiness.

Results: The temporal pole (TP) and premotor cortex BA6 were also more active in participants with ASDs. The visual V5 area in the left occipital cortex was found to be more activated in ASD participants compared with TD controls. Actually, the ASD group showed deactivation only in visual cortex V1 and right temporal fusiform areas, while the controls showed deactivation in a variety of areas. The largest differential cluster of deactivation between groups was found in the left temporal lobe primary auditory (A1) and secondary somatosensory (S2) areas extending to the planum temporale.

Conclusion: Valence scaling was abnormal in ASDs. The positive valence induces lower deactivation and negative valence increased deactivation in visual areas in subjects with ASDs. Positive valence induces abnormally strong activity in ASD in multiple regions including the right insula, which is related to salience processing and mirror neuron system. Participants with ASDs may have difficulty in automatic processing of the salience of expressions and therefore fail to produce valence scaling of brain activity; in contrast to controls, they activate and/or deactivate inappropriately during facial stimuli presented dynamically.

M2-01-3

Resting state neuronal network in adults with adolescent ADHD

Lindholm, Päivi¹; Kiviniemi, Vesa²; Nikkinen, Juha²; Veijola, Juha³; Ebeling, Hanna⁴; Moilanen, Irma¹

¹Institute of Clinical Medicine, University and University Hospital of Oulu, Department of Childpsychiatry, Finland; ²Oulu University Hospital, Diagnostic Radiology, Finland; ³Institute of Clinical Medicine, University of Oulu, Department of Psychiatry, Finland; ⁴Institute of Clinical Medicine, University and University Hospital of Oulu, Department of Childpsychiatry, Finland

Background: Resting state fMRI studies have shown differences in regional brain activity and functional connectivity between subjects with and without ADHD. Prevalence of ADHD seems to decline after adolescence but it has been questioned whether the decline is real or due to underestimation of the prevalence of adult ADHD. AIM: The aim of our study was to find out whether there are group level differences in resting state brain network activity between the adults assessed as ADHD cases in adolescence when compared to controls, despite of probable ADHD symptom reduction.

Materials and methods: Present ADHD status of 43 adolescent ADHD cases and 43 age and gender matched controls was assessed with a semi structured interview covering the diagnostic ADHD symptoms (DSM-IV). Resting state fMRI-imaging was made with GE 1.5 T, TR 1,800 ms, TE 40 ms, flip angle 90, 64 × 64 matrix, FOV 25.6 cm, 28 4 mm slices. The data was analyzed with group independent component analysis using dual regression approach (Kiviniemi et al. 2009).

Results: Only two of 43 adolescent ADHD cases fulfilled diagnostic ADHD symptom criteria. The ADHD group showed increased resting state brain activity in four perirolandic components including precuneus/S1 (M1), bilateral M1 of hands (superior frontal gyrus, premotor cortex BA 6), hand M1 (precuneus cortex, M1) and bilateral primary upper sensorimotor area of feet (M1 BA 4a, S1 BA 1) and in frontobasal area (subcallosal cortex BA 11, orbitofrontal cortex BA 25) and right dominant DMN (cerebellum I–IV)

Conclusion: ADHD symptom rate decreased as expected. Six IC sources were revealed to differ between the ADHD and the control groups during resting state.

Reference:

1. Kiviniemi V, Starck T, Remes J, Long X, Nikkinen J, Haapea M, Veijola J, Moilanen I, Isohanni M, Zang YF et al (2009) Functional segmentation of the brain cortex using high model order group PICA. *Hum Brain Mapp* 30(12):3865–3886

M2-01-4**Resting state studies in ASD**

Kiviniemi, Vesa¹; Paakki, Jyri-Johan¹; Rahko, Jukka²; Nikkinen, Juha¹; Tervonen, Osmo¹; Moilanen, Irma²

¹Oulu University Hospital, Diagnostic Radiology, Finland; ²Oulu University Hospital, Child Psychiatry, Finland

Background: Resting state fMRI studies have shown differences in regional brain activity and functional connectivity in multiple neuropsychiatric disorders, however relatively few of them have been conducted in Autism Spectrum Disorders (ASD).

Aim: The aim of our study was to find out how well resting state brain activity methods could reveal abnormalities in high-functioning adolescent ASD-subjects when compared to matched local controls. Also white matter was imaged with DTI data that were compared to fMRI connectivity measures.

Materials and methods: 30 adolescent ASD cases and 30 age and gender matched controls was assessed with multiple tests (DSM-IV). Resting state fMRI-imaging with only visual fixation was made with GE 1.5 T, TR 1,800 ms, TE 40 ms, flip angle 90, 64 × 64 matrix, FOV 25.6 cm, 28 4 mm slices. Homogeneity (ReHo) and Fractal dimension (Df) of resting state BOLD signal and TBSS for DTI. All results were corrected for multiple comparisons ($p < 0.05$).

Results: PICA detected an abnormal visual component activity in addition to Fractal dimension. ReHo was found to be abnormal in right insular regions (salience areas), in primary sensor areas and in inferior frontal gyrus (mirror neuron network). Fractal dimension revealed most marked differences between subjects overlapping with both ReHo and PICA results.

Conclusion: Background spontaneous activity of the brain is abnormal in ASD. Fractal dimension of spontaneous brain activity seems to be most sensitive resting state marker for ASD. Right insular salience areas and occipital visual areas showed differences in spontaneous brain activity. TBSS detected a fault in inferior longitudinal fasciculus that joins the insular and visual areas.

M2-01-S**Symposium summary abstract: convergence of neuroimaging findings in ASD versus ADHD**

Kiviniemi, Vesa

Oulu University Hospital, Diagnostic Radiology, Finland

Background: Resting state fMRI studies and task activation have been opposed in the past by several neuroimaging researchers. However the task activation studies actually are often based on differentiating activation signal increases from baseline activity. It seems logical that if the baseline activity is abnormal then activation results will be destined to be abnormal as well.

Aim: Find out if resting state, task activation and DTI results might converge in detecting differences between Autisms Spectrum Disorders (ASD) group and controls.

Materials and methods: 30 adolescent ASD cases and matched controls was assessed with multiple tests (DSM-IV). The MRI-data was analyzed with FSL PICA, regional Homogeneity (ReHo) and Fractal dimension (Df) of resting state BOLD signal and TBSS for DTI. All Task activation data [N-back and dynamic facial expression (fear and happy)] were analysed using FEAT in FSL. Results were corrected for multiple comparisons ($p < 0.05$).

Results: Both N-Back and Facial happy differences overlapped with Df and ReHo differences in right insular areas related to salience network (SN). Fear related differences overlapped with PICA and Df differences in visual cortex V1. The only significant difference in white matter tracts in TBSS exists in the inferior longitudinal fasciculus (IFL) that connects the SN and V1.

Conclusion: Baseline BOLD signal fluctuations abnormalities and task activation abnormalities converge in visual and salience processing areas. White matter tract joining these areas is abnormal. ADHD differences do not converge/overlap with the differences of ASD.

Symposium abstracts:

1. Working memory in autism: V. Vuontela, et al.
2. Valence scaling of dynamic facial expressions altered in high-functioning ASD: an f-MRI study: Nummenmaa L, et al.
3. Resting state neuronal network in adults with adolescent ADHD: Lindholm P, et al.
4. Resting state neuronal network in ASD subjects: Kiviniemi V et al.

M2-02-S**Classification of psychiatric disorders: problems, dilemmas, challenges and opportunities**

Tamminen, Tuula¹; Rutter, Michael²; Taylor, Eric³; von Knorring, Anne-Liis³; Bursztejn, Claude⁴

¹University of Tampere, Finland; ²London Institute of Psychiatry, UK; ³Uppsala University Hospital, Sweden; ⁴University Hospital of Strasbourg, France

There is ongoing work preparing for a new edition of the American Psychiatric Association's DSM and the World Health Organization's ICD. In this symposium, chaired by Prof. Tamminen, Prof. Rutter would present his view of the principles of classification. He is a Chair of the ICD11 child and adolescent psychiatry working party, but his paper would be strictly a personal view. In this paper he will conclude that neither DSMIV nor ICD10 is working well and that a radical overhaul is needed. There is a large number of supposedly different diagnoses and it is impossible for anyone to remember all the rules for these disorders. Also, numerous studies have shown that there is a massive co-occurrence of disorders and extensive reliance on the waste-basket category of "not otherwise specified". He will make suggestions of how this situation might be improved. In particular, it will be suggested that, instead of having an unsatisfactory grouping of disorders specific to childhood, it would be better to have developmental variations described for all psychiatric diagnoses. The particular diagnoses in the current onset in childhood grouping would be redistributed in order to emphasise the continuities with adult disorders. A new, simpler classification is being developed for disorders leading to referral to mental health services. It is likely that this will contain about two dozen diagnoses and that these will be expressed in terms that will be understandable to non medical, as well as medical, primary care professionals.

Prof. Taylor will discuss the paper from the perspective of someone who has long been concerned with issues of classification and who is currently a member of one of the DSMV committees. The second discussant will be Prof. von Knorring who will approach the matter from Scandinavian perspective. The third discussant Dr. Bursztejn will present reactions from French speaking Europe. Following some open discussion Prof. Tamminen will draw the symposium to a close.

M2-03-1**Baby's mind in mind: prenatal parental capacity to mentalise about the baby. Data from the FinnBrain birth cohort study**

Pajulo, Marjukka¹; Karlsson, Hasse¹; Karlsson, Linnea¹; Korttesluoma, Susanna¹; Halme-Chowdhury, Elina²

¹University of Turku, Finland; ²Abo Akademi, Finland

Background: During pregnancy and early parenting, capacity to mentalise, or “reflective functioning” (RF), refers to parent’s capacity to think of the baby as a separate, individual person with own experiences and feelings and to give value to this thinking. High mentalising capacity in the parent is considered important for the child’s better social, emotional and cognitive development, through more accurate interpretations in interaction, and more secure child attachment. The capacity enables the parent to see other people’s behaviour as meaningful and predictable, which increases experience of safety and reduces experience of stress.

Aims: To assess prenatal parental mentalising capacity for the first time with a questionnaire method (adjusted PRFQ), and its variability among normative Finnish mothers and fathers. Also, to explore its association with (1) sociodemographic background factors, (2) other prenatal factors (for e.g., parental–fetal attachment, MFAS; prenatal depression and anxiety, EPDS, PRAQ), (3) experience of pregnancy, delivery and the newborn, (4) child birth status, (5) postnatally experienced stress from parenting (PSI/SPSQ) and (6) postnatal view of the baby. Material Current study is part of a large Finn Brain birth cohort (n = 10,000), exploring effects of early (prenatal) stressful environment together with genetic factors on child development and later predisposition to certain illnesses. Material includes normative mothers and fathers (n = 300) during pregnancy, recruited for the pilot phase of the large study. Prenatal PRFQ1 questionnaire is validated within this sample against an RF interview method (PI) with 30 mothers.

Results: The authors will present results from the pilot data, and the validation procedure.

Conclusions: Strengthening parental mentalising capacity has been found clinically particularly relevant focus in working with risk families. It is important to explore its exact role for child well being and development using large populations.

M2-03-2**Prenatal and postnatal psychological symptoms of parents and family functioning: the impact on child internalizing problems. The Generation R Study**

Tiemeier, Henning; Velders, Fleur P; Dieleman, Gwen; Verhulst, Frank C

Erasmus MC, Child and Adolescent Psychiatry, The Netherlands

Background: Although relations of various parental psychological problems and family functioning with child development are well documented, it remains unclear whether specific prenatal or specific postnatal risk factors are independently associated with child emotional problems or whether observed associations can be explained by general parental psychopathology. Using a stepwise approach, we examined the effects of prenatal and postnatal depressive symptoms,

prenatal and postnatal hostility of the parents, as well as prenatal family functioning on the risk of child internalizing problems.

Methods: This study was embedded in Generation R: a population-based cohort from fetal life onwards. Mothers and fathers of 2698 children provided information about depressive symptoms, symptoms of hostility and family functioning during pregnancy and 3 years after birth. Mother and father each reported on child internalizing problems when the child was 3 years old.

Results: Parental depressive symptoms increased the risk of child internalizing problems, but this increase was explained by parental symptoms of hostility. Postnatal symptoms of hostility of mothers (OR = 1.35, p-value <0.001), postnatal symptoms of hostility of fathers (OR = 1.30, p-value <0.001), and family functioning as experienced by the mother (OR = 1.23, p-value <0.001) each contributed independently to the risk of child internalizing problems.

Conclusions: Parental hostility and family functioning are associated with an increased risk of child internalizing problems, independent of parental depressive symptoms. These findings suggest that prevention and intervention strategies should also focus on hostile behaviour in families with young children.

M2-03-3**Prenatal anxiety, and behavioural and cortisol outcomes in the child: evidence from the ALSPAC cohort**

Glover, Vivette¹; O'Donnell, K¹; O'Connor, TG²

¹Imperial College, UK; ²University of Rochester Medical Center, UK

We used information from the Avon Longitudinal Study of Parents and Children (ALSPAC) population cohort which had detailed questionnaire data at 18 and 32 weeks of pregnancy using the Crown Crisp questionnaire, and child behavioural data from maternal report using the Strengths and Difficulties (SDQ) questionnaire from 4 to 13 years. We studied the association between maternal anxiety during pregnancy and the long term behavioural outcomes for the child. We determined whether any associations were due to prenatal maternal mood, rather than confounding factors such as postnatal mood and maternal attitudes to the child. The association with the diurnal cortisol pattern at adolescence was also studied. We compared the outcome for the children of the 15% most anxious women at 32 weeks gestation with the rest. We also collected diurnal saliva from a subgroup of 1,000 of the children, aged 15 years, for cortisol assay. Growth curve modelling showed that increased levels of SDQ scores were associated with prenatal anxiety, and these persisted until the children were 13 years old. Levels of conduct problems and symptoms of ADHD were higher in boys, and emotional problems in girls. Although the growth patterns were altered by postnatal maternal mood and maternal attitudes, substantial associations with prenatal anxiety persisted. Multilevel modelling of the cortisol data showed that the children of the more anxious mothers at 32 weeks showed a significant decrease in the cortisol awakening response, which persisted after covarying postnatal anxiety. These changes in diurnal cortisol were unlikely to underlie the behavioural problems. This study adds further support to the concept of the fetal programming, and that the environment in the womb can have long term effects on the neurodevelopment of the child. A major implication is that all mothers should be screened for emotional problems, including anxiety, during pregnancy, and appropriate interventions initiated.

M2-03-S**Prenatal psychiatry: findings from three birth cohorts***Karlsson, Hasse*

University of Turku, Finland

Marjukka Pajulo: “Baby’s mind in mind”: Evaluating prenatal parental capacity to mentalise about the baby and parenting. Experience and pilot data from the FinnBrain birth cohort study. Henning Tiemeier: Prenatal and postnatal psychological symptoms of parents and family functioning: the impact on child internalizing problems. The Generation R Study Vivette Glover: Prenatal anxiety, and behavioural and cortisol outcomes in the child: evidence from the ALSPAC cohort. In this symposium, the authors focus on prenatal factors that may affect the later psychiatric health of the offspring. In the first study the prenatal parental mentalising capacity is assessed for the first time with a questionnaire method and its association with sociodemographic background factors, experience of pregnancy, delivery and the newborn, child birth status, postnatally experienced stress from parenting and postnatal view of the baby. The second study is from the large Generation R study. Mothers and fathers of 2,698 children provided information about depressive symptoms, symptoms of hostility and family functioning during pregnancy and 3 years after birth. Mother and father each reported on child internalizing problems when the child was 3 years old. The third talks is from ALSPAC population cohort, which has detailed questionnaire data, including maternal anxiety at 18 and 32 weeks of pregnancy and child behavioural data from maternal report from 4 to 13 years. The aim was to study the association between maternal anxiety during pregnancy and the long term behavioural outcomes for the child. The researchers determined whether any associations were due to prenatal maternal mood, rather than confounding factors such as postnatal mood and maternal attitudes to the child. The association with the diurnal cortisol pattern at adolescence was also studied.

M2-04-1**The psychological well being of survivors of institutional child abuse in Ireland***Skokauskas, Norbert*

Department of Psychiatry, Trinity College Dublin, Ireland

Background: Institutional abuse is distinguished from familial child abuse, in that it is perpetrated by adults working within the context of various types of institutions serving children in the community including residential care centers, schools, churches, and recreational facilities. Industrial schools in Ireland were intended to provide a basic industrial training to young people but in reality the industrial training was of a nature that served the needs of the institution rather than the needs of the child.

Objectives and methods: This paper addresses the issue of the institutional child abuse in Ireland, which occurred within the context of religiously affiliated residential institutions. By analyzing official reports and scientific studies it will describe the scale and the nature of institutional child abuse in Ireland.

Results: Over a period of 50 years, more than 30,000 children deemed to be petty thieves, persistent truants, or from dysfunctional families, were sent to industrial schools, the last of which closed in

2000. Physical abuse and emotional child abuse were very common in industrial schools and sexual abuse occurred in many of them, particularly boys’ schools. In terms of adult adjustment, 81.78% of survivors of institutional abuse at some point in their life had met the diagnostic criteria for a DSM IV anxiety, mood, alcohol, or substance use, or personality disorder.

Conclusions: Physical and emotional abuse and neglect were features of the industrial schools. Sexual abuse occurred in many of them, particularly boys’ institutions. In most instances residual effects of child abuse were carried over into adulthood. This submission is a part of symposium “Child abuse and maltreatment: prevalence, long-term consequences and prevention”.

M2-04-2**Development, implementation and results after a web-based pattern for telephonic contact point of the special representative on cases of child abuse***Fegert, Jörg M.¹; König, Lilith²; Rassenhofer, Miriam²; Seitz, Alexander³; Spröber, Nina²*¹University of Ulm, Germany; ²University of Ulm, Germany; ³Soon Systems GmbH, Germany

Background: In the context of the activity of the Special Representative on Cases of Child Abuse in Germany a telephonic contact point was established to give all relevant people the opportunity to express critics, experiences and claims which are to be introduced into recommendations of the round table „Sexueller Kindesmissbrauch in Abhängigkeits- und Machtverhältnissen in privaten und öffentlichen Einrichtungen und im familiären Bereich” and the German government.

Method: A web-based documentary pattern was developed and used by the specialists that answered incoming calls to collect anonymously the information given by victims and contact persons of victims about sexual abuse and to make these information publicly available.

Results: From the incoming calls that were collected between end of May to beginning of November 2010 (N = 5,750), N = 1,940 analysable data sets are available.

Discussion: Besides to the presentation and illustration of the documentary pattern, first descriptive and qualitative results are introduced, requirements for politics are discussed. Most important topic was improvement of trauma therapies and expansion (e.g. for elderly people, men). Other frequently expressed concerns were related to compensation/prosecution, advanced training for professionals, abolishing tabooing/prevention and confidence in politics. This submission is a part of symposium “Child abuse and maltreatment: prevalence, long-term consequences and prevention”.

M2-04-3**Protection of children in European countries: analysis of the concluding observations of the UN Committee on the Rights of the Child***Puras, Dainius; Radzeviciene, Jurgita*

Department Psychiatry, Vilnius University, Lithuania

Background: All European countries have ratified the UN Convention on the Rights of the Child. The process of monitoring of the implementation of the Convention, which is performed by the UN Committee on the Rights of the Child, is a good opportunity to raise awareness and sensitize policy makers on the need to invest in effective measures of protection of children from violence and child abuse.

Objectives and methods: This paper addresses the major challenges in the field of prevention of child abuse in European countries. By analyzing official and alternative reports from European countries, and the Concluding Observations of the Committee on the Rights of the Child, issued during 2007–2011, the presentation will highlight those obstacles and challenges which are specific for European region and relevant to the field of mental health and emotional well-being.

Results: Analysis of the process of monitoring of implementation of the UN Convention on the Rights of the Child in 20 European countries indicates that despite significant progress in many issues in the field of protection of children's rights (such as right to life, survival, physical health, education, etc.), serious challenges still exist throughout Europe which threaten effective protection of children from all forms of violence. The main systemic and attitudinal challenges will be analyzed and discussed, such as continuing over-use of institutional care, societal tolerance for corporal punishment of children and recent tendencies in national policies to regress to repressive measures towards troubled adolescents. The increasing role of mental health policies and services in this context will be discussed. This submission is a part of symposium Child abuse and maltreatment: prevalence, long-term consequences and prevention

M2-04-4

Childhood stress, serotonin transporter gene and brain structures in major depression

Frodl, Thomas¹; Carballedo, A.¹; Lisiecka, D.²

¹Trinity College Dublin, Adelaide and Meath Hospital incorporating the National Children's Hospital, St. James Hospital Dublin, Ireland; ²Department of Psychiatry, Trinity College Dublin, Ireland

Introduction: The underlying neurobiology of major depressive disorder (MDD) is likely to represent an interaction between genetic susceptibility and environmental factors like stress. There is growing evidence that epigenetic processes might mediate the effects of the social environment during childhood on gene expression.

Objectives: We investigated in multimodal high-resolution MRI-genetic studies whether microstructural and functional brain changes are the result of gene-environment interactions.

Methods: Patients with major depressive disorder (MDD), high-risk subjects for developing MDD and healthy participants were investigated using high-resolution magnetic resonance imaging (MRI), high angular resolution diffusion imaging (HARDI) and functional MRI. Furthermore, we assessed early life adversity and measured the serotonin transporter polymorphisms (5-HTTLPR).

Results: Patients with MDD have smaller hippocampal and frontal cortex volumes associated with gen-environment interactions. Healthy subjects at risk for developing depression, who manage to stay healthy, show better activation of the frontal cognitive control system. Those who had stronger fibre connections between frontal and temporal brain regions also better managed incidences of adversity in early life.

Conclusions: Stress × gene interactions seem to account for at least some of the structural brain changes. Resilience against environmental stressors might be associated with stronger neural fibre connections and more effective cognitive control networks. This

submission is a part of symposium Child abuse and maltreatment: prevalence, long-term consequences and prevention.

M2-04-5

Results of the victim hotline of the Roman Catholic Church in Germany

Zimmer, Andreas

Diocese Trier, Germany

Objectives and methods: This paper addresses the issue of child abuse in Germany which occurred within the context of catholic institutions and families. By presenting the data of the german catholic hotline, it shows what victims have reported about institutional child abuse in the Catholic Church in Germany.

Results: Until October 2010 3.431 Telefon calls were registered and 213 Internet counselings, consisting of 1.375 messages. For the First Report of the Hotline the statistic documentations of N = 1.325 of this contacts where analysed. They included information from 569 men (50.6%) and 505 women (44.9%). The average age of the victims was 55.54. The start of the Hotline shows, how public attention opens a door for victims to talk. The victims reported a great variety of long-term consequences, including posttraumatic stress disorder and problems in relationships.

Discussion: The main data about the self reporting of victims will be analyzed and discussed. Including whether the question how some of the victims were more successfully in coping with consequences of the abuse. This submission is a part of symposium "Child abuse and maltreatment: prevalence, long-term consequences and prevention"

M2-04-6

Sexual abuse in institutions in Germany—first results from the research group based on information collected in the framework of the telephonic contact point of the Special Representative on Cases of Child Abuse and deduced prevention strategies

Spröber, Nina¹; König, Lilith¹; Rassenhofer, Miriam²; Seitz, Alexander³; Fegert, Jörg M.⁴

¹University of Ulm, Germany; ²University of Armenia, Germany; ³Soon Systems GmbH, Germany; ⁴University of Ulm, Germany

Background: Based on several incidents of sexual abuse in institutions in Germany in 2009/2010 the Special Representative on Cases of Child Abuse in Germany established in May 2010 a telephonic contact point to give victims the opportunity to express critics, experiences and claims which are to be introduced into recommendations of the round table „Sexueller Kindesmissbrauch in Abhängigkeits- und Machtverhältnissen in privaten und öffentlichen Einrichtungen und im familiären Bereich“ and the German government in order to improve prevention and intervention of sexual abuse.

Method: Specialists answered the incoming calls. Information was assessed anonymously in a web-based documentary pattern. Up to November 2010 N = 1,940 analysable data sets (from N = 5,750 incoming calls) were collected. N = 398 (35.7%) persons told about sexual abuse in institutions. Men were more often affected by sexual abuse in institutions than women. N = 121 persons gave detailed information about the abuse. Qualitative analyses were run to know more about abusive process and helpful aspects to cope with abuse.

Discussion: Prevention and intervention strategies (e.g. reducing tabooing, improving therapies) are discussed based on the results of the population that gave information. This submission is a part of symposium “Child abuse and maltreatment: prevalence, long-term consequences and prevention”.

M2-04-S

Child abuse and maltreatment: prevalence, long-term consequences and prevention

Skokauskas, Norbert

Department of Psychiatry, Trinity College Dublin, Ireland

Child abuse and maltreatment: prevalence, long-term consequences and prevention N Skokauskas (chair) Trinity College Dublin (TCD), Ireland JM. Fegert (discussant) University of Ulm (UU), Germany Speakers: Protection of children in European countries: Analysis of the Concluding Observations of the UN Committee on the Rights of the Child D Puras, Vilnius University, Lithuania Childhood stress, serotonin transporter gene and brain structures in major depression T Frodl, TCD, Ireland Results of the victim hotline of the Catholic Church in Germany A Zimmer, Church Abuse Hotline, Germany Sexual abuse in institutions in Germany N Spröber, UU, Germany Development, implementation and results a web-based documentary pattern for the telephonic contact point of the Special Representative on Cases of Child Abuse J M Fegert, UU, Germany The psychological well being of survivors of institutional child abuse in Ireland N Skokauskas, TCD, Ireland.

Background: Child abuse is a global problem with serious life-long consequences and includes all forms of physical and emotional ill-treatment, sexual abuse, neglect, and exploitation.

Methods: In this 120 min symposium, we will use 90 min of 6 (15 min each) interactive lectures, 30 min of feedback, comments, group discussion and questions.

Results: While child abuse is a recognized public health and social problem worldwide, less is known about institutional child abuse. This symposium will review scientific data on institutional abuse from a recent studies conducted in Germany and Ireland. Beside the epidemiological aspect, this symposium will focus on neurobiological issues (abuse during childhood can cause important regions of the brain to form and function improperly with long-term consequences) and public health perspectives and analysis of the concluding observations of the UN Committee on the Rights of the Child. ALL speakers will submit their abstracts individually.

M2-05-1

Use of RCMAS-2 for assessing anxiety in children: further cross-cultural validity evidence from a large Asian sample

Ang, Rebecca¹; Lowe, Patricia²; Yusof, Noradlin³

¹Nanyang Technological University, Psychology, Singapore;

²University of Kansas, USA; ³Independent Researcher, Singapore, Singapore

Factor structure, reliability, convergent and discriminant validity, and US norms of the Revised Children’s Manifest Anxiety Scale, Second Edition (RCMAS-2) scores in a Singapore sample of 1,618 school-aged children were examined. The RCMAS is one of the most widely used self-report inventories for assessing anxiety in children and

adolescents, across research, school and clinical settings. The RCMAS-2 was recently published in 2008 and there is limited research on RCMAS-2 in comparison to its predecessor. The RCMAS has been limited by its focus on samples of mostly suburban, middle-class Caucasian youth. Hence, the present study addressed two issues: the need to examine if US norms are appropriate for use with ethnically diverse groups of children and adolescents, and the need to examine the reliability and validity of RCMAS-2 scores in ethnically diverse samples. While there were small reliable differences in the average RCMAS-2 T-scores found across various demographic groupings, on the whole, the US norms appear adequate for use in the Asian Singapore sample. Results from item bias analyses suggested that biased items detected had small effects and were counterbalanced across gender and ethnicity, and hence, their relative impact on test score variation appears to be minimal. Results of factor analyses on the RCMAS-2 scores supported the presence of a large general anxiety factor, the Total Anxiety factor, and the five-factor structure found in US samples was replicated and found to be invariant across gender and ethnicity. Internal consistency estimates ranged from adequate to good, and 2-week test–retest reliability estimates were comparable to previous studies. Evidence providing support for convergent and discriminant validity of the RCMAS-2 scores was also found. Taken together, findings provide additional cross-cultural evidence of the appropriateness and usefulness of the RCMAS-2 as a measure of anxiety.

M2-05-2

Copy number variations in children and adolescents with early onset obsessive-compulsive disorder

Gruenblatt, Edna¹; Romanos, Marcel²; Renner, Tobias³; Walitza, Susanne⁴

¹University of Zurich, Child and Adolescent Psychiatry, Switzerland;

²University of Munich, Dept. of Child and Adolesc. Psychiatry and Psychother., Germany; ³University of Wuerzburg, Dept. of Child and Adolescent Psychiatry, Germany; ⁴University of Zurich, Dept. of Child and Adolescent Psychiatry, Switzerland

Childhood obsessive-compulsive disorder (OCD) was once considered a rare childhood condition, although recent epidemiological data rank OCD as the fourth most common psychiatric disorder, making it twice as common as panic disorder or schizophrenia. Recently, investigations of attention-deficit hyperactivity disorder, autism and schizophrenia have implicated de novo and/or rare copy number variation (CNV) as being potentially pathogenic in these disorders. The duplication or deletion process can disrupt a variable number of genes, resulting in alternate gene products or changes in allelic expression. Given the highly heritable and variable nature of OCD, we therefore hypothesized that individually rare CNV near the single nucleotide polymorphism (SNP)-1438G/A (rs6311) on the serotonin-receptor 2A (HTR2A) promoter, previously reported to be associated with early-onset OCD (A-allele carriers), might contribute to disease risk and severity of early-onset OCD. In a case-control population (136 cases and 106 age matched controls) of early-onset OCD we investigated both the association of the rs6311 and the CNV to OCD. We could confirm the association of the A-allele with OCD in children and adolescents with early-onset with Odds Ratio (OR) = 1.69 (95% CI: [1.17, 2.46]; $p = 0.005$). Strikingly, we found that subjects with the deletion CNV are associated with very early-onset of OCD (2.5 years earlier; $p = 0.031$) as well as having increased Y-BOCS scores (8.7 points higher compared to “normal” CNV and duplication; $p = 0.004$) related to enhanced severity of symptoms. Additionally, the deletion was associated with OCD with OR = 7.56 (95% CI: [1.32, 142.84]; $p = 0.020$). These results point to the functional importance of this

promoter region of the HTR2A, suggesting an influence on OCD occurrence and probably also on onset and severity of the disorder.

M2-05-3

Effectiveness of CBT for youth anxiety disorders in mental health clinics

Heiervang, Einar R¹; Wergeland, Gro Janne²; Fjermestad, Krister²; Haugland, Bente SM³; Øst, Lars Göran⁴; Havik, Odd E²; Oeding, Kristin⁵; Bjåstad, Jon F⁵

¹University of Oslo, Norway; ²University of Bergen, Norway; ³Uni Research, Norway; ⁴Stockholm University, Sweden; ⁵Haukeland University Hospital, Anxiety Disorders Research Network, Norway

Introduction: Efficacy studies of CBT for childhood anxiety disorders have found significant effects for up to 70% of the patients, but less is known about the effectiveness with youths in routine clinical care. We have therefore studied the effectiveness of the FRIENDS for Life program in seven child and adolescent mental health outpatient clinics in Western Norway.

Method: Subjects were randomized to group or individual treatment, some with a preceding wait-list period with a mean duration equal to the treatment period of 10 weeks. A total of 183 referred youths aged 8–15 years with separation anxiety, generalized anxiety or social anxiety disorder were included. There were few exclusion criteria. Pre-, post- and 1 year follow-up assessments included the Anxiety Disorder Interview Schedule for children and parents, Spence Children's Anxiety Scale and the Short Mood and Feelings Questionnaire. **Results:** Significant improvement was observed both for individual and group treatment with regard to diagnostic status, anxiety symptoms and depressive symptoms, with little change after the wait-list period. Post-treatment around had recovered from their principal diagnosis. There was a moderate effect size on anxiety and depressive symptoms. Preliminary data show continuing effects at 1 year follow-up, with no significant effect of treatment format.

Discussion: The study is one of the largest studies of CBT for anxiety in children carried out in regular clinics with regular clinicians. The FRIENDS for Life CBT program seems to be an effective treatment when delivered in ordinary clinical settings, with equal effects for individual and group formats.

Conclusion: Manualised CBT is effective for childhood anxiety disorders in ordinary clinical care both at short- and long-term (1 year) and may be recommended for clinical use.

M2-05-4

Auditory perception of heartbeat: familial patterns of anxiety sensitivity, child temperament, and clinical implications for a new methodology

Pollock-Wurman, Rachel¹; Carter, Alice²; Kuusikko-Gauffin, Sanna³; Jusilla, Katja³; Moilanen, Irma⁴; Pauls, David⁵

¹Harvard University, Massachusetts General Hospital, Department of Psychiatry, USA; ²University of Massachusetts-Boston, Department of Psychology, USA; ³University of Oulu, Finland; ⁴University and University Hospital of Oulu, Finland; ⁵Harvard University, Massachusetts General Hospital, Psychiatric and Neurodevelopmental Genetics Unit, USA

Anxiety sensitivity (AS) is a tendency to fear sensations of autonomic arousal and is associated with panic disorder and the onset of panic attacks. AS has also been associated with elevated anxiety symptoms and disorders in children and adolescents at risk for anxiety. The anxious temperament termed Behavioral Inhibition (BI) is one of the earliest stable indicators of vulnerability for anxiety. Very few studies investigate information-processing methodologies, perceptual and/or cognitive biases, and anxiety from a familial perspective. We present data examining the relationship of AS, cardiac sensitivity, and indices of BI to the auditory perception of heartbeat sounds. Participants are 100 families, which are part of an ongoing longitudinal study of BI (Kagan, 1994). Children, and at least one parent completed a series of signal-in-white-noise auditory heartbeat detection tasks. Signal detection methodology is used to quantify the listeners' perceptual sensitivity to and bias for responding to neutral tones, normal heartbeat and abnormal heartbeat sounds (the full methodology is published in *Behaviour Research and Therapy*, Pollock et al, 2006). Results suggest that parent and child responses on heartbeat tasks are correlated, but reveal different (i.e., developmentally unique) decision strategies to fear-relevant information. A heartbeat perception paradigm appears a relevant and age-appropriate task for children who may be at risk for anxiety disorders. By relating cognitive and biological risk factors (e.g., AS, BI) to the assessment of perceptual vulnerability, both in children and in families, we may enhance current information-processing assessment and its role in family-genetic studies. Furthermore, implications for the use of this novel auditory perception methodology in other child/family clinical populations (e.g., autism spectrum disorders, PTSD, MDD) will be discussed.

M2-05-5

Association of macrophage migration inhibitory factor (MIF) gene polymorphism with Tourette syndrome

Morer, Astrid¹; Landeros-Weisenberger, Angeli²; Katsovich, Lily²; Eastman, Maria²; Carolyn, Yrigollen²; Hoekstra, Pieter³; Boss-Veneman, Netty³; Bucala, Richard⁴; Leckman, James F²

¹Hospital Clinic Universitari, Child and Adolescent Psychiatry, Spain; ²Yale University, Child Study Center, USA; ³University of Groningen, Psychiatry, The Netherlands; ⁴Yale University, USA

Objective: To evaluate the potential relationship between functional polymorphisms of Macrophage migration inhibition factor (MIF) and chronic tic disorders, mainly Tourette Syndrome (TS).

Methods: We genotyped MIF gene polymorphisms in a total of 264 patients with chronic tic disorders: 104 patients were recruited in the Netherlands and 160 in USA. These were compared to 1362 controls. Genotyping by standard methods was performed for both polymorphisms: MIF-CATT (5-8) and rs755622 (G/C).

Results: We found significant differences in haplotypes between patients and controls ($p < 0.001$). The frequency of genotype 6/7-CATT was significantly higher in TS patients ($p = 0.025$). Genotypes with the 7-CATT allele were more common in subjects with tics than in controls ($p = 0.036$). Allele CATT5 was significantly associated with having PANDAS ($p = 0.025$).

Conclusions: Allele CATT 7 could be related to susceptibility for tic disorders. PANDAS patients had a significantly lower representation of the high-expression MIF haplotype, with 5-CATT being the most frequent genotype. These results indicate that promoter polymorphisms in the MIF could be risk factors for chronic tic disorders and implicate MIF in the pathogenesis and clinical presentation of TS.

M2-06-1

The brief-infant toddler social and emotional assessment (BITSEA): clinical validation

Carter, Alice¹; Briggs-Gowan, Margaret²

¹University of Massachusetts, Boston, Psychology Department, USA;

²University of Massachusetts, Boston, USA

There is increasing recognition that very young children exhibit significant social-emotional behavior problems and delays in the acquisition of competence that are associated with clinically significant child and family impairments. The BITSEA was developed to aid in the early detection of psychopathology, in the hopes that early detection would lead to enhanced reduced long-term impairment. This presentation will review recent findings from several studies, highlighting (1) evidence for treatment sensitivity from a randomized controlled trial (Lowell et al., in press) that documents that the BITSEA can detect changes in child functioning in an intervention context; and (2) strong sensitivity and specificity in relation to psychiatric diagnoses in a multi-site study of approximately 250 1–3 year olds, who were recruited from a parent-infant mental health clinic, a developmental disorders clinic and primary pediatric clinics. Parents in this second study were interviewed about their child's psychopathology with the Preschool Age Psychiatric Assessment (PAPA; Egger and Angold, 2004). In addition to basic psychometric properties across multiple samples, the sensitivity and specificity of the BITSEA in relation to disorders derived from the PAPA interviews will be presented.

M2-06-2

The occurrence of social-emotional difficulties and/or deficits among 18-month old toddlers

Pihlaja, Päivi¹; Fyrsten, Jenny²; Alakortes, Jaana²; Kaljonen, Anne³; Moilanen, Irma⁴; Ebeling, Hanna⁴; Carter, Alice⁵

¹University of Turku, Faculty of Education, Finland; ²University and University Hospital of Oulu, Department of Child Psychiatry, Finland; ³University of Turku, Finland; ⁴University and University Hospital of Oulu, Finland; ⁵University of Massachusetts, Boston, USA

This study concentrates on the occurrence of social-emotional problems among toddlers. The estimate of general prevalence of children's (3–15 years old) social and emotional difficulties has been for years around 15–20% (Hietala 1974; Andersson 1983; Puura et al 1995; Walker et al. 1995). In Danish study 18-month-olds mental health problems' prevalence was 16–18% (Skovgaard et al. 2007). By many researches social-emotional difficulties seems not to be transient (Lavigene et al 1998; Mesman and Koot 2001; Morgan et al. 2009; Briggs-Gowan et al. 2006). These kinds of difficulties and/or deficits are more often identified with boys but also girls seem to have problems. Identified problems differ between girls and boys. The aim of this study was to examine the occurrence of social-emotional difficulties among 18-month old children (N = 511) by using the BITSEA (Briggs-Gowan and Carter 2006). Statistical computations and data management were performed

using SAS System Release 9.1 and SPSS 16.0 for Windows. In all tests, p-values less than 0.05 were considered statistically significant. Cutpoints of scores indicate if a child has possible problems or possible deficit/delay. In this data the prevalence of possible problems was 12.9% and the difference between girls (11.9%) and boys (14.1%) was not statistically significant ($p = 0.4711$). The presence of possible deficit/delays was 8.4% and here the difference between girls (5.5%) and boys (11.4%) was statistically significant ($p = 0.0184$). By the BITSEA 12.96% of toddlers indicate possible problems and 8.42% possible deficits/delay. It seems that we need further research about the prevalence of these problems, and also what kinds of problems appear. Gender is also very interesting. In toddlerhood gender does not play very significant role, but in later childhood and preschool age boys exhibit more social-emotional and behavioural problems than girls.

M2-06-3

What Northern Finnish mothers and fathers find most straining in their toddlers' behaviour?

Fyrsten, Jenni¹; Alakortes, Jaana¹; Joskitt, Leena¹; Hurtig, Tuula¹; Pihlaja, Päivi²; Carter, Alice³; Ebeling, Hanna¹; Moilanen, Irma¹

¹Institute of Clinical Medicine, University and University Hospital of Oulu, Department of Child Psychiatry, Finland; ²University of Turku, Finland; ³University of Massachusetts, Boston, USA

Objective: Our aim was to study which problems in toddlers' behaviour burden their parents most. Parental stress was measured by Parenting Stress Inventory (PSI) and toddlers' symptoms were evaluated by Brief Infant-Toddler Social Emotional Assessment (BITSEA). **Methods:** Original data consisted of 200 18-month-old children who lived in city of Oulu in 2008-09. PSI and BITSEA were delivered by nurses in child health centers in Oulu to parents with an 18-month-old child attending a routine health examination. Parents filled in questionnaires at home and returned them to researchers by mail. The data was analyzed by PASW 18v program using Mann-Whitney U-test and Spearman's Correlation test.

Results: Finally, 198 mothers and 175 fathers filled both PSI and BITSEA. PSI Total scores were significantly higher in boys than in girls when reported by mothers ($M = 34.8$ vs. 26.0 , $p < .001$), but not when reported by fathers ($M = 29.3$ vs. 26.6 , NS). When studying mothers' PSI Total scores, boys' externalizing ($r = .458$) and dysregulation ($r = .441$) symptoms scores and total problem scores ($r = .530$) correlated significantly, and Internalizing symptoms scores ($r = .327$) had modest correlation. In girls, only externalizing symptoms scores ($r = .416$) and total problem scores ($r = .433$) correlated significantly. Girls' dysregulation symptoms scores had lower correlation with mothers' PSI subscale parental distress scores ($r = .318$). When studying fathers' PSI Total scores, boys' externalizing symptoms scores correlated significantly with PSI subscale Difficult child scores ($r = .438$) and girls' dysregulation symptoms scores had modest correlation with PSI subscale difficult child scores ($r = .326$).

Discussion: Mothers were specially strained by toddlers' externalizing problems and they evaluated problems more precisely. Fathers' total parenting stress did not correlate with toddlers' problematic behaviour, but they experienced boys' externalizing and girls' dysregulative symptoms difficult.

M2-06-4 Mothers' and fathers' judgements of their toddlers by using the Brief infant-toddler social and emotional assessment (BITSEA) in the Northern Finland

Alakortes, Jaana¹; Fyrsten, Jenni¹; Hurtig, Tuula¹; Pihlaja, Päivi²; Carter, Alice³; Joskitt, Leena¹; Ebeling, Hanna¹; Moilanen, Irma¹

¹University and University Hospital of Oulu, Department of Child Psychiatry, Finland; ²University of Turku, Finland; ³University of Massachusetts, Boston, USA

Background: The earlier studies report good to excellent inter-rater agreement between the parents in evaluating their toddlers by using BITSEA. There are no studies considering possible differences between mothers and fathers in their assessments. The aim of this study was to explore the differences and similarities in the way Finnish mothers and fathers assess their toddlers' behaviour by using BITSEA.

Methods: In years 2008–2009 both parents of 18-month-old children living in Oulu in Northern Finland (n = 173, 98 girls, 75 boys, M = 19.4 months) filled in BITSEA reliably. The nurses in all child health care centers in Oulu delivered BITSEA questionnaires to parents with an 18-month-old child attending a routine health examination. The parents filled in the questionnaires at home and returned them to the researchers by mail. The data was analysed by PASW 18v program: Wilcoxon test and Cohen's Kappa.

Results: Maternal BITSEA Competence mean score was significantly higher than paternal mean score both in girls (M = 18.6 vs. 17.8, p = .033) and boys (M = 17.6 vs. 16.7, p = .016). Agreement between mothers' and fathers' Competence ratings was poor in girls ($\hat{\kappa} = -.06$) and fair in boys ($\hat{\kappa} = .18$). Maternal BITSEA Total problems mean score was significantly higher than paternal in boys (M = 8.8 vs. 6.5, p = .001), but not in girls (M = 6.2 vs. 6.1, NS, respectively). Agreement between mothers' and fathers' Total problems ratings was moderate in girls ($\hat{\kappa} = .42$) and fair in boys ($\hat{\kappa} = .25$). Maternal externalizing (M = 2.6 vs. 1.7, p < .001) and dysregulation (M = 3.1 vs. 2.1, p < .001) problems mean scores in boys were significantly higher than paternal ones, while no such differences were found in girls.

Discussion: Mothers seem to perceive their toddlers' social-emotional competences more sensitively and experience their little sons more demanding than fathers do. Further research is needed to elucidate factors behind these tentative results.

M2-06-S Toddlers' social-emotional problems and/or deficits/delays

Pihlaja, Päivi¹; Fyrsten, Jenni²; Alakortes, Jaana²; Carter, Alice³

¹University of Turku, Faculty of Education, Finland; ²University and University Hospital of Oulu, Department of Child Psychiatry, Finland; ³University of Massachusetts, Boston, USA

The subject of this symposium is interesting in the Finnish context, but also internationally. One reason for this is that toddler's mental health problems, emotional and social difficulties have for decades been a forgotten subject in research. Relatively little is known of the occurrence or the picture of these problems among toddlers. (Mathiesen and Sanson 2000; Briggs-Gowan et al 2006; Carter et al 2004; Beermink 2007; Reijneveld et al 2004.) In this symposium we examine the occurrence of social-emotional problems

among toddlers, and the differences and similarities in the way mothers and fathers assess their toddlers' skills and behaviour. One presentation examines which problems burden toddlers' parents most. Parental stress was measured by the Parenting Stress Inventory (PSI) and toddlers' symptoms by the brief infant-toddler social emotional assessment (BITSEA). The above-mentioned three studies have been conducted in Finland by researchers from the Universities of Oulu and Turku. Social-emotional and behavioural difficulties were assessed by using the Finnish version of the BITSEA. This instrument is sensitive enough to trace and identify toddlers' social-emotional difficulties, and it is based on the current knowledge of the competence, delays, difficulties and disorders of social-emotional development. In this symposium also Professor Alice Carter from the University of Massachusetts Boston, who has been developing the BITSEA and ITSEA, will present new validity data for the BITSEA that is in relation to psychiatric diagnosis on the PAPA (a diagnostic interview with the parent). Presentations: Carter: "The Brief-Infant Toddler Social and Emotional Assessment (BITSEA): Clinical Validation" Pihlaja: "The occurrence of toddlers social-emotional difficulties..." Fyrsten: "What Northern Finnish mothers and fathers find most straining..." Alakortes: "Mothers and Fathers Judgements of Their Toddlers..."

M2-07-1 The 4U Study project: two longitudinal multi-centre intervention studies in special education

Tick, Nouchka¹; Breeman, Linda¹; Hopman, Juliette¹; van Lier, Pol²; Struiksma, Chris³; Schöpping, Marie-Bernadette⁴; Wubbels, Theo⁵; van der Ende, Jan⁶; Verhulst, Frank⁶; Maras, Athanasios¹

¹Yulius, Yulius Academy, The Netherlands; ²VU University Amsterdam, The Netherlands; ³CED-group, The Netherlands; ⁴Yulius, Education, The Netherlands; ⁵Utrecht University, The Netherlands; ⁶Erasmus MC, The Netherlands

Background: Children with severe psychopathology form a special group in the educational setting. In the Netherlands, most children who meet DSM-IV criteria for psychopathology attend schools for special education. Not much is known about how psychopathology influences the classroom environment and how teachers can effectively improve their behavior to attend to these children's needs.

Objective: The 4U Study is a longitudinal, multi-centre study in Dutch primary and secondary special education. Its first aim is to provide an overall picture of the educational situation in special education, focusing on students' and teachers' functioning and classroom interactions. Second aim is to investigate effects of a classroom-based behavioral intervention, the Good Behavior Game (GBG), on students' and teachers' functioning.

Intervention: The GBG enables teachers to handle students' behavior by structuring the classroom situation and positively reinforce the students. During a school year, the GBG is played 3 times a week. Children are assigned to groups and can achieve rewards by behaving well. Teachers receive training and monthly coaching.

Design: Effects of the GBG are tested in a Randomized Controlled Trial. 28 participating schools are randomly assigned to an intervention or a control condition. To examine the effects of the GBG, assessments are completed at 4 time-points during the study; at baseline, after 6 months, post-intervention and 4-month follow up.

Study population: Data are collected among 457 students in special primary school (response rate: 88%), 440 students in special secondary school (73%), 140 teachers (85%) and 648 parents (60%).

Instruments: Self-, teacher- and parent reports are collected on students' psychopathology, teachers' wellbeing, teacher-student

relationships, and student's peer-relations, using validated questionnaires. Classroom observations are conducted of student's on-task and rule breaking-behavior and teacher-student-interaction.

M2-07-2

Psychopathology in special education: a challenge for students and teachers

Maras, Athanasios¹; Hopman, Juliette¹; Breeman, Linda¹; van Lier, Pol²; Struiksmma, Chris³; Schöpping, Marie-Bernadette⁴; Wubbels, Theo⁵; Tick, Nouchka¹; van der Ende, Jan⁶; Verhulst, Frank⁶

¹Yulius, Yulius Academy, The Netherlands; ²VU University Amsterdam, The Netherlands; ³CED-group, The Netherlands; ⁴Yulius, Education, The Netherlands; ⁵Utrecht University, The Netherlands; ⁶Erasmus MC, The Netherlands

Background: Children in special education represent a diverse population, with a variety of developmental, externalizing and internalizing disorders. As effective education can contribute to these children's future opportunities, teaching these children effectively is an important challenge for teachers. Little is known, however, about the day-to-day challenges these students and their teachers encounter.

Objective: The 4U Study provides an insight into class functioning of a large population of children with mental health problems. Aim of this study is to describe the psychopathology and classroom functioning of students with a variety of mental health problems, and how these factors influence the classroom environment and teachers' wellbeing.

Methods: 897 students in primary and secondary schools for special education participate in the 4U Study. Data on student psychopathology are collected using the Strengths and Difficulties Questionnaire (SDQ), the Child Behavior Checklist (CBCL), the Problem Behavior in Schools Interview (PBSI), and the DSM-IV diagnosis taken from the school file. Data on classroom functioning are obtained by the Classroom Climate Scale, and by class observations of on-task and disruptive behavior. Observations are conducted by trained research assistants. Data regarding the well being of teachers are collected using the Utrechtse Burn-out Scale (UBOS) and the Teacher Efficacy Scale (TES).

Results: Results provide extensive information on classroom functioning of children with severe mental health problems in Special Education. Results also provide information on the well being of teachers in special education. Also, the correlation between students' psychopathology and teachers' well being is explored.

M2-07-3

Interactions in special education classrooms: peer-relations and teacher–student relationships of children with mental health problems

Breeman, Linda¹; van der Ende, Jan²; Hopman, Juliette¹; Tick, Nouchka¹; van Lier, Pol³; Struiksmma, Chris⁴; Schöpping, Marie-Bernadette⁵; Verhulst, Frank²; Maras, Athanasios¹; Wubbels, Theo⁶

¹Yulius, Yulius Academy, The Netherlands; ²Erasmus MC, The Netherlands; ³VU University Amsterdam, The Netherlands; ⁴CED-group, The Netherlands; ⁵Yulius, Education, The Netherlands; ⁶Utrecht University, The Netherlands

Background: Most children attending special education in the Netherlands are diagnosed with ADHD, autism spectrum disorders, or anxiety disorders, and have additional behavioral problems. Teaching these children can be considered a challenging task. Positive peer-relations and positive student–teacher interaction can contribute to these children's well-being and future prospects. However, these children more often engage in negative interactions. Specific knowledge on these children's classroom interactions can help us create a more positive classroom environment for these children.

Objective: The 4U Study provides an overall picture of class-interactions in special education classrooms. Results are compared to normative data of children attending regular education.

Methods: Twelve schools for elementary special education participate in the 4U Study. Data on classroom interactions is collected among 457 children and 57 teachers. Teacher–student relationships are examined from both teacher and student perspective, using the Student-Teacher Relationship Scale (STRS; teacher-report), and the Questionnaire on Teacher Interaction (QTI; student-report). Students are asked to express their preferences for their classmates, using a peer nomination form and the Classroom Climate Scale (CCS). Also, classroom observations of teacher-student interaction are conducted.

Results: First, data from the QTI enable the characterization of special educational teachers by means of interpersonal profiles based on students' perceptions. Second, the teacher–student relationship is discussed from teacher, student, and observer point-of-view. Finally, an overall picture of classroom environment, and positive and negative peer-relations is provided. Results are compared to normative data.

M2-07-4

Improving classroom behavior in special education: effects of the Good Behavior Game

Hopman, Juliette¹; van der Ende, Jan²; Breeman, Linda³; Tick, Nouchka¹; Wubbels, Theo⁴; van Lier, Pol²; Struiksmma, Chris⁶; Schöpping, Marie-Bernadette⁷; Verhulst, Frank²; Maras, Athanasios¹

¹Yulius, Yulius Academy, The Netherlands; ²Erasmus MC, The Netherlands; ³Yulius, The Netherlands; ⁴Utrecht University, The Netherlands; ⁵VU University Amsterdam, The Netherlands; ⁶CED-group, The Netherlands; ⁷Yulius, Education, The Netherlands

Background: Previous research in regular education has shown long-lasting effects of the Good Behavior Game (GBG) on the psychopathology of children. As the effects were strongest for 'high risk' children, the 4U Study aims to examine whether effects of the GBG go beyond prevention, and can be shown for children and adolescents who attend special education because of serious psychopathological problems.

Methods: Effects of the GBG are assessed in a Randomized Controlled Trial. Twelve schools for primary and sixteen schools for secondary special education are assigned to an intervention (GBG-condition) or a control condition. In the control condition, students receive education as usual. Assessments are conducted at four time points. Data are collected among 897 students, 140 teachers and 648 parents. Effects of the GBG on children's emotional and behavioral problems are assessed with the Strengths and Difficulties Questionnaire self-report (SDQ), the Problem Behavior at School Interview (PBSI), and with classroom observations of on-task and rule-breaking behavior.

Results: Results determine the extent to which the GBG affects students' psychopathology and classroom behavior. In addition,

analyses are conducted to investigate whether the GBG is more effective for children with specific psychiatric diagnoses, severity of psychopathology, age or gender.

M2-07-S

Improving classroom behavior of children with severe mental health problems

Tick, Nouchka¹; Hopman, Juliette¹; Breeman, Linda¹; Verhulst, Frank²; Wubbels, Theo³; Lier, van, Pol⁴; Ende, van der, Jan²; Struiksmma, Chris⁵; Schöpping, Marie-Bernadette⁶; Maras, Athanasios¹

¹Yulius, Academy, The Netherlands; ²Erasmus MC, Child and Adolescent Psychiatry, The Netherlands; ³Utrecht University, Faculty of Social and Behavioural Sciences, The Netherlands; ⁴VU University Amsterdam, Developmental Psychology, The Netherlands; ⁵CED-group, Research and Development, The Netherlands; ⁶Yulius, Education, The Netherlands

Background: Many students who meet DSM-IV criteria for psychopathology display behavior which disrupts an effective educational setting. Although adequate education is a major protective factor, little is known about methods by which teachers can effectively improve student behavior.

Objective: To examine the effects of a universal school-based intervention, the Good Behavior Game (GBG), on student behavior, class climate, and wellbeing of their teachers in elementary, and in secondary special education.

Intervention: The effects of the GBG are tested longitudinally in two randomized controlled trials. The GBG is a school-based intervention, which enables teachers to handle behavioral problems, by structuring the classroom situation and positively reinforce students who comply with classroom rules. Teachers receive training and monthly coaching sessions.

Study population: The first trial included 440 students (12 secondary schools, response rate: 73.0%) and the second trial included 457 students (12 primary schools, response rate: 86.0%) in Dutch special education. Data were collected at several time points, starting September 2009. In both studies, self-, teacher-, and parent-reports were collected on students' psychopathology, teachers wellbeing, classroom environment, and interpersonal relations. Also, classroom observations of on-task behavior and disruptive behavior were conducted.

Discussion: ESCAP participants are invited to discuss effective use of behavioral interventions, and their impact on class climate to increase academic performance.

Presentations:

1. Two longitudinal multi-centre intervention studies.
2. Psychopathology in special education: A challenge for children and teachers.
3. Promoting positive interactions in the classroom: Peer relations and teacher-child relations in elementary special education.
4. Improving classroom behavior in special education: Effects of the Good Behavior Game in elementary and secondary special education.

M2-08-1

Children in psychodynamic psychotherapy. Changes in global functioning

Odhammar, Fredrik; Carlberg, Gunnar

The Erica Foundation, Sweden

This presentation discusses a sub-study of the Erica Process and Outcome study (EPOS) where the primary aim was to examine if children's global functioning improves after psychodynamic psychotherapy. Second, variables that may predict changes in global functioning were examined statistically and qualitatively, e.g. the child's age and gender; diagnosis and comorbidity; treatment variables. The sample consisted of 33 children (5–10 years of age) who participated in psychodynamic psychotherapy with parallel work with parents. Twenty-nine children had at least one DSM-IV diagnosis, and 15 children had comorbid conditions. At the start of the psychotherapy, the most frequent diagnoses were attention disorder and disruptive behaviour. Child psychotherapists rated the children's global functioning (CGAS, HCAM). Large effect sizes were obtained (1.80 and 1.98). In order to illuminate the complex connection between process and outcome the study was complemented with in-depth case studies where data was taken from questionnaires, completed by the child therapists every third month. The analysis showed that important individual change, e.g. attainment of formulated goals, was not always reflected in the change rated using the CGAS. The analysis of the two therapies also showed that the intersubjectivity between child and psychotherapist was essential and permitted the therapist to get closer to the child at a deeper level; the therapist's approach and interventions could be characterised as creating a firm therapeutic frame in which intersubjectivity can be tested. These findings will be discussed in relation to theory and generic factors in psychotherapy.

M2-08-2

Intervention promoting positive motherhood among nulliparous pregnant women with an intense fear of childbirth

Salmela-Aro, Katariina¹; Rouhe, Hanna²; Erja, Halmesmaki²; Toivanen, Riikka²; Tokola, Maiju³; Saisto, Terhi²

¹University of Helsinki, Finland; ²Helsinki Central Hospital, Finland; ³Tunnetila, Finland

Transition to parenthood is a challenging and demanding life stage. The aim of this randomized intervention study was to promote successful transition to parenthood by promoting efficacy towards childbirth which was aimed to enhance positive parenting among nulliparous pregnant women with an intensive fear of childbirth. Pregnant women (n = 4,500) filled in questionnaire during their early pregnancy at the maternity clinic related to fear of childbirth. Those having high fear of childbirth (n = 450) were randomized into intervention (one third, n = 155; 51 refused) and control (two thirds, n = 301) groups. They filled in questionnaire on their efficacy towards childbirth in the middle and late pregnancy and 3 months after the childbirth they filled in motherhood and parenting scale. In addition women and their partners filled in scales measuring depressive symptoms and relationship satisfaction three times. Intervention included six psycho-education group sessions before the childbirth and once after the childbirth. The results analysed by latent growth curve modeling showed that intervention increased mother's efficacy towards childbirth which, in turn, predicted increase in positive parenting after the childbirth among those in the intervention group. Among the control group, fathers with low level of depressive symptoms acted as a resource for mothers: father's level of depressive symptoms was positively related to mother's slope of depressive symptoms. In addition, mothers in the control group level of satisfaction was positively related to increase of relationship satisfaction to fathers slope of satisfaction.

M2-08-3**A colloquy with life: child-centred family psychotherapy with dying parents and their children***Schmitt, Florence*¹; *Piha, Jorma*²¹University of Turku and University Hospital of Turku, Child Psychiatry, Finland; ²University of Turku and University Hospital of Turku, Finland

What does the proximity of death do to family members? The proximity of imminent death provokes several overlapping processes. Family members are oscillating between two realities: waiting for a miracle and knowing at the same time there is no hope. Unfinished business toward life and family relationships, previous experiences of losses (deaths, divorce) are activated, and traumatic experiences from early childhood and early interaction experiences (especially in case of pain) are activated by being nursed and taking care for. Finally, “maternal preoccupation” and the worries about keeping children alive, being sorry for the children and experiencing sorrow are crucial. Child-centred family therapy emphasizing parenthood provides help for the dying parents, who is challenged to be a “good-enough parent” until the end, and for the children who are not abandoned alone with their grief not daring to ask any questions. The family therapy intervention could be called “Carpe Diem” psychotherapy because the therapist can never know who you will encounter when coming on the ward to see the patient: the patient can be present or not (care, radiotherapy, examinations), the patient can be unconscious, different family members are variously present, nurses or staff can enter the room at any moment. Because each meeting can be the last one working intensively with the patients and their children is the core of psychotherapy: the time left is used as a colloquy with life, rather than waiting for death.

M2-08-4**Addressing relationships: a case report***Tenhunen-Kejonen, Minna*¹; *Kemppinen, Kaarina*¹; *Lyytinen, Kirsti*¹; *Hutunnen, Eeva*¹; *Kumpulainen, Kirsti*²¹Kuopio University Hospital, Department of Child Psychiatry, Finland; ²University of Eastern Finland/Kuopio University Hospital, Department of Child Psychiatry, Finland

Secure nurturing relationships are crucial for the development and psychological wellbeing of the child. To achieve this aim among patients referred to a child psychiatric outpatient unit an intervention based on the attachment theory including both individual, parent-child and group sessions was developed. Main elements of the intervention were to help the parent to identify emotional reactions of the child and his/her cues for the need of reaching the attachment figure, to understand the meaning of parental emotions and behavior to the child and to enhance the parental reflective functioning. Individual working goals were formulated for each parent-child dyad. Attachment was assessed by parent interviews and videotaped parent-child interaction. Intervention included two network meetings, three parent-child sessions, ten individual and ten group sessions for the parent during 6 months. Network meetings were organized to activate social networks (both natural and professional) to support the process. In group sessions psychoeducation, video based materials and peer support were the central elements. In individual sessions parents' internal working models

were addressed. Until now seventeen families have started this intervention. The age range of the children has been between 2 and 7 years. Most of the parents participating the intervention were mothers (17 mothers, 2 fathers). Preliminary report of this intervention will be presented through a case report using video clips on parent-child interaction.

M2-09-1**Childhood and adolescence symptoms predicting first episode psychosis in the general population based Northern Finland 1986 Birth Cohort***Mäki, Pirjo*¹; *Miettunen, Jouko*¹; *Moilanen, Irma*²; *Kaakinen, Marika*³; *Taanila, Anja*⁴; *Hurtig, Tuula*²; *Murray, Graham*⁵; *Joukamaa, Matti*⁶; *Heinimaa, Markus*⁷; *Therman, Sebastian*⁸; *Veijola, Juha*⁹¹University of Oulu, Department of Psychiatry, Finland; ²University of Oulu, Clinic of Child Psychiatry, Finland; ³University of Oulu, Institute of Health Sciences, Finland; ⁴University of Oulu and Oulu University Hospital, Institute of Health Sciences, Finland; ⁵University of Cambridge, Department of Psychiatry, UK; ⁶University of Tampere, Tampere School of Public Health, Finland; ⁷University of Turku, Department of Psychiatry, Finland; ⁸National Institute for Health and Welfare, Dept of Mental Health and Substance Abuse Services, Finland; ⁹University of Oulu and Oulu University Hospital, Department of Psychiatry, Finland

For pre-arranged symposium: “Adolescents at risk for psychosis in Finnish studies”

Background: Prospective general population based reports are lacking on specific symptoms in childhood and adolescence predicting first episode psychosis in youth.

Aim: We wanted to describe which kind of symptoms precede onset of psychosis when taking account specificity.

Material and methods: Members (N = 6,676) of the Northern Finland 1986 Birth Cohort, an unselected general population based cohort, were examined in childhood and adolescence. The 8-year field study included Rutter B2 questionnaire for teachers screening neurotic and antisocial symptoms. The 16-year field study included a 21-item PROD-screen questionnaire screening prodromal symptoms for last 6 months. The Finnish Hospital Discharge Register was used to find out new cases of severe mental disorders till the age of 23 years.

Results: High scores of symptoms in Rutter B2 did not associate with later psychosis. The highest prevalence of positive symptoms in the PROD-screen were in the group of adolescents who developed psychotic disorder (65%) compared to group of subjects who developed non-psychotic disorder (36%, $p < 0.001$), and to group of subjects without any disorder (27%, $p < 0.001$). Respective figures for negative symptoms were 55% in the group of future psychotic adolescents, 30% in the group of subjects with non-psychotic disorder ($p = 0.01$) and 24% in the ‘healthy’ ($p < 0.001$).

Conclusions: Features reported by teachers at age 8 did not predict later psychosis. Both positive and negative psychotic-like symptoms were common at age 16 years in adolescents who later developed psychosis.

Acknowledgements: This study has been funded by the Signe and Ane Gyllenberg Foundation, the Sigrid Juselius Foundation and the Academy of Finland.

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M2-09-2

Predicting psychosis within one year among new adolescent psychiatric outpatients: utility of the Structured Interview for Prodromal Syndromes (SIPS)

Therman, Sebastian; Manninen, Marko; Lindgren, Maija; Suvisaari, Jaana; Huttunen, Matti

National Institute for Health and Welfare, Finland

Background: Symptom inventories designed to detect psychosis in its prodromal phase have only been tested in highly selected samples, where the transition rate for the subgroup designated to be at risk has been 35% or even higher (Cannon 2008).

Aim: Our aim was to evaluate the utility of the Structured Inventory for Prodromal Syndromes (SIPS; Miller 2003) in an unselected adolescent psychiatric sample, where such an interview could be useful in initial patient evaluation.

Material and methods: Patients aged 15–18, without a history of psychotic disorder, were recruited from consecutive entrants to youth psychiatry clinics in Helsinki. A total of 173 youths took part in evaluation and consented to the follow-up study. A specialized research team assessed their prodromal symptoms reported or seen in a videotaped interview. Psychosis incidence within 1 year was determined from the Finnish National Hospital Discharge Register, which captures 80% of psychoses among Finnish youth (Perälä 2007).

Results: The symptomatic youths determined to be at-risk by the SIPS criteria were at higher risk for conversion to psychosis within 1 year than those who were not (OR 3.1): 12 of 62 (19%) became psychotic, while the average risk was 10%.

Conclusions: Self-reported symptoms reported during a 1–2 h interview are somewhat predictive of future psychosis also within a relatively unselected psychiatric sample. The present results offer some insights on how to fine-tune prodrome detection algorithms for everyday clinical use.

Acknowledgements: This study has been funded by the Academy of Finland.

M2-09-3

Social phobia and social cognition among adolescents at risk for psychosis in Finnish specialized services for adolescents

Ranta, Klaus¹; Väänänen, Juha¹; Lehtinen, Klaus²; Niemi, Päivi M³

¹Tampere University Hospital, Department of Adolescent Psychiatry, Finland; ²Tampere University Hospital, Department of Psychiatry, Finland; ³University of Turku, Department of Teacher Education, Finland

We present findings on the frequency and co-occurrence of symptoms of social phobia and symptoms of early psychosis in a sample of 13–18-year-old Finnish adolescents seeking treatment for severe mental health symptoms. Finland has a nation-wide secondary specialist service system for adolescents aged 13–22 years. According to our findings the rate of psychosis-like symptoms associated with a heightened risk for emerging psychosis, as

measured with the PROD-screen (Heinimaa et al. 2003), is 2.5-fold among adolescents in the specialized services compared to adolescents in the Finnish normal population. Furthermore, symptoms of social phobia and depression largely overlap with at risk-symptoms among these patients. These results indicate that Finnish specialized mental health services for adolescents likely reach possible at-risk subjects, and that adolescents in the early phases of psychosis very often suffer from emotional disorders such as social phobia and depression. These findings also extend earlier findings of a high frequency of social anxiety and depression found among somewhat older at-risk subjects. A separate research project focusing on social cognition, and in particular metaperception (i.e. subjects' thinking about how one is seen by others) among adolescents with varying severity of social phobia and psychosis symptoms, is also described. On the basis of population studies, a very high degree of social anxiety may be associated with paranoid thinking and at-risk state. In this research project metaperception related to an imagined scenario of a situation where one is showing symptoms of social anxiety is compared between adolescents with social phobia, adolescents with social phobia and comorbid risk for psychosis, and controls. Some preliminary results are presented. All findings are discussed in the light of service system development, and treatment indications for adolescents at risk for psychosis in Finland and internationally.

M2-09-4

JERI: need-adapted family and social network oriented treatment model for adolescents at risk of psychosis in Finland

Granö, Niklas; Roine, Mikko; Karjalainen, Marjaana

Helsinki University Central Hospital, Jorvi Hospital, Psychiatry, Finland

For pre-arranged symposium: “Psychosis proneness in youth in Finnish samples”

Background: Previous studies and intervention models for adolescents at risk of developing psychosis have focused on cognitive behavioral therapy and medication. So far only little is known about other type of care in this target group.

Methods: The JERI (Jorvi Early psychosis Recognition and Intervention)-team in southern Finland (area of 500,000 inhabitants) is designed to be an early detection and intervention team for adolescents at risk of psychosis. The intervention model is based on need-adapted family and social network meetings in the light of stress-vulnerability model of psychosis. JERI-team works with adolescents in their natural developmental surroundings, as at school or at home, together with community co-workers, such as social workers, school nurses and GPs. The team is itself a multivocational team of eleven employees, e.g. psychiatric nurses, occupational therapists, psychologists and a supervising psychiatrist. The team works in two different districts. The team meets with adolescents together with their parents and the community co-worker who had originally contacted the team for reasons of unclear mental health problems. This family therapy oriented intervention means that the combinations of meetings are need-adapted and planned together. Purpose is to find together with adolescent, family and social network a way to reduce experienced stress, to solve current problems in situation of life and support overall functioning.

Results: Previous results from a short follow-up study present a significant improvement in mental health and overall functioning in adolescents at risk of developing psychosis.

Conclusion: Experience and results of JERI-model suggest that family and social network meetings should be included as a part of care for adolescents at risk of developing psychosis.

M2-09-S

Adolescents at risk for psychosis in Finnish studies

Mäki, Pirjo

University of Oulu and Oulu University Hospital, Department of Psychiatry, Finland

The onset for psychoses occurs commonly in adolescence. Psychoses are often severe, and are amongst the leading causes of worldwide burden of disease. Some of them, mainly schizophrenia and other non-affective psychoses, are nowadays considered to be neurodevelopmental disorders with premorbid features before fulminant psychoses.

In recent years operationalized instruments have been developed to detect prospectively psychotic-like symptoms or prodromal risk for psychosis and predict psychosis in clinical populations. In some high risk cohorts a remarkable amount of first episode psychoses have been detected during follow-up. In order to be able to prevent the development of psychoses in the future we need instruments to identify subjects at high risk. Prevention of fulminant psychoses also requires knowledge of efficient treatment strategies.

In this symposium are presented different study projects focusing on psychotic-like symptoms or prodromal risk for psychosis in youth in Finland including general and clinical populations. We will hear about early detection and therapies of adolescents at risk for developing psychosis. This symposium is organized together with the Section of Adolescent Psychiatry, Finnish Psychiatric Association.

Pirjo Mäki: Childhood and adolescence symptoms predicting first episode psychosis in the general population based Northern Finland 1986 Birth Cohort.

Sebastian Therman: Predicting psychosis within 1 year among new adolescent psychiatric outpatients: utility of the Structured Interview for Prodromal Syndromes (SIPS).

Klaus Ranta: Social phobia and social cognition among adolescents at risk for psychosis in Finnish specialized services for adolescents.

Niklas Granö: JERI: need-adapted family and social network oriented treatment model for adolescents at risk of psychosis in Finland.

M2-10-1

Being child psychiatrist in Palestine-practices and aspirations

Tawfiq, Salman; Salman, Tawfiq

Palestinian Association for Child and Adolescence Mental Health (PACAMH), Child psychiatry, Palestinian Territory, Occupied

Since 1948: 800,000 prisoners (25%) of population. Means 10–30 cases daily. Since 1967 420,000 prisoners. 21,000/year After the year 2000 (7000 prisoner/year). On 15.09.2010 (8,500 prisoner still)-418 children under 16 years. Children are the main casualties of the Israeli occupation. With estimates of post-traumatic reactions among Palestinians under 18 years old ranging exceeding 34% (Tabet, Abdulla, Elhelou and Vostanis, 2006), and over 45% for

children under 16 exposed to military violence (Qouta, Punamaki and El Sarraj, 2003), Palestinian mental health professionals are faced with the enormous challenge of addressing the needs of these affected children. The Palestinian Mental Health Services and several non-governmental agencies who work in the West Bank and the Gaza area have been involved in treating children with PTSD and in training professionals and para-professionals in this area. It is evident that most of the children in need do not receive any therapeutic interventions. This is mainly a product of the following factors: scarcity of trained mental health professionals, difficulties in reaching mental health centers through check-points and transportation difficulties, reluctance on the part of families and children to use outside professional help, and the scores of children with undiagnosed or masked post-traumatic reaction. Observational study, children's attachment behavior tended to be constantly activated and mothers faced great difficulties to attenuate children's distress and provide a feeling of safety. The mothers told about their painful dilemma of knowing and feeling that harmonious interaction is a precondition for the children's survival and health, but the military situation made them unable to create safe place for their children.

M2-10-S

Difficulties of being a child psychiatrist in Eastern Europe

Çuhadarođlu Çetin, Füsün

Hacettepe University School of Medicine, Child and Adolescent Psychiatry, Turkey

In this session it is aimed to present the problems faced in the professional field (needs, services, resources, opportunities, and others) in the Eastern European Countries. The suggestions which will be brought by the presenters will be discussed and paths for the development of common solutions will be planned.

M2-10-T

Training in Europe: a roadmap for trainees

Simmons, Meinou¹; Bailey, Susan²; Barrett, Elizabeth³; Colin, Stephanie⁴; McNicholas, Fiona⁵

¹Cambridge and Peterborough Foundation Trust, Child and Adolescent Psychiatry, UK; ²Greater Manchester West Mental Health NHS Foundation Trust, Adolescent Psychiatry, UK; ³AMNCH Tallaght, Dublin, Department of Child and Adolescent Psychiatry, Ireland; ⁴Service de psychopathologie de l'enfant et de l'adolescent CHU Avicenne (APHP) BOBIGNY, Department of child psychiatry, France; ⁵University College, Dublin, Department of Child and Adolescent Psychiatry, Ireland

Chair: Prof Sue Bailey Speakers and their topics: Prof Sue Bailey (UK)-UEMS CAP-Current issues around training from UEMS CAP perspective. eg issues around logbooks and how to raise standards in Eastern Europe. Dr. Meinou Simmons (UK)-Current CAP chair EFPT (2010–2011)-What our working group are working on in 2010–2011 for European CAP trainees. Attempts to improve CAP representation in EFPT and drive to raise standards. Attempt to introduce annual CAP country reports as well as general psychiatry country reports. How EFPT provides opportunities to work

collaboratively around training standards/goals and links with UEMS. Dr. Stephanie Colin (FRA)-Former CAP chair (2005–2009), EFPT-Training in Europe. Different Systems and similar challenges. How should Europeans CAP be trained, according to the book? and how are the training policies determined? Role of EFPT and UEMS Dr. Liz Barrett (IRL)-Previous CAP chair (2009–2010) -What we know now about training in Europe and current opportunities for European Trainees-EFPT Results from 2009–2010 EFPT 27 country survey on training in CAP experiences. Creating new opportunities. Information on Trainee led initiatives and Opportunities for CAP trainees with European Organisations-EFPT, building links with international organisations, the Donald J. Cohen Fellowship, YP Programme, the SOPSI/Fondazione Child opportunities. The BoSS Study. Prof Fiona McNicholas (IRL)-ESCAP 2013-involvement of trainees in ESCAP. Trainee input/opportunities, why to come and what will be available-working to the future.

M2-11-1

Evaluation and quality assurance in service delivery for children and adolescents with mental health problems in the Netherlands

Deschamps, Peter

UMC Utrecht, The Netherlands

In the past couple of years, a system for quality assurance has been developed by the Dutch Psychiatric Association. Based on self-evaluation, it allows (child and adolescent) psychiatrists to evaluate both their quality of care and their systems for quality assurance. The current model is based on a self-evaluative process, taking place in a group of psychiatrists. The evaluation includes: patient care, processes and organization of care and cooperation within colleague groups. The process consists of several steps, all digitized to ascertain a small paper-load. First, psychiatrists due to reregister in the Dutch Medical Specialists Registrations Committee submit an online form to enroll in the process. Second, they fill in a number of questionnaires online. Third, results of the questionnaires are reviewed within the group of psychiatrists and based on their self-evaluation they delineate a plan of improvement. Finally, all questionnaires and plans of improvement are discussed and adapted during a visit of two especially trained colleagues. At the end of the day, a report is written about the process including future recommendations. During the workshop, the current situation of QA in service delivery for children/adolescents with mental health problems in the Netherlands will be presented. Comparisons with other European countries and future developments will be discussed.

M2-11-2

Evaluation and quality assurance in service delivery for children and adolescents with mental health problems in Austria

Spiel, Georg; Monika, Finsterwald

promente: kinder jugend familie, AUSTRIA

Quality assurance is one of the most important critical factors for success nowadays, also for (non-) profit organisations in the area of

healthcare: There are more and more demands about providing evidence of the effectiveness and efficacy of different interventions as well as about providing transparency. Conducting evaluations is one way to meet these demands.

In the following contribution different evaluation proceedings of a community based NGO called pmkijufa and located in Austria are presented. Its main aim is fostering children, adolescents and young adults with impaired mental and social development. Based on a holistic approach, pmkijufa takes care of various types of housing, vocational education and step-by-step integration, counselling and therapy in a narrow sense as well as prevention programs.

Evaluation is an inherent part of quality assurance within pmkijufa. The NGO meets the challenge to develop tailor-made evaluation concepts for each service domain and to conduct internal evaluations over a longer period of time. The different evaluation actions cover the outcome of each service domain as well as the quality of the underlying structures and processes (see Donabedian, 1988). The standards of evaluation (utility, feasibility, propriety, accuracy) formulated by the DeGEval (2002) are also applied. Staff members are included in the whole evaluation process to make “participatory evaluation” possible. A 7 step plan was developed within pmkijufa used for outcome evaluation in each service domain. These steps are explained more precisely in this contribution. Furthermore, actions for enhancing the quality of structures and processes are reported, future plans are added.

M2-11-3

Evaluation and quality assurance in service delivery for children and adolescents with mental health problems in the UK

Thompson, Peter

Royal College of Psychiatrists, College Centre for Quality Improvement, UK

A national study of inpatient child and adolescent mental health services (CAMHS) conducted in the UK in 2000 found that services were variable both in quality and also their clinical practice. With only approximately 100 services in the country, clinicians also felt very isolated and did not have opportunities to share best practice. As a result the Quality Network for Inpatient CAMHS (QNIC) was established in 2001. The network sets service standards for inpatient services. These are comprehensive and developed in collaboration with frontline staff. They draw on policy, research and expert consensus. Services who join the network go through a process of self and peer review to enable them to see how well they are performing against the standards and to meet with other clinicians to learn from each other. The review process is annual and the network is now in its tenth year of visits. Over 95% of services in the UK participate. Following the success of QNIC, the Quality Network for Community CAMHS (QNCC) was established in 2006. It follows the same model but works with services who treat young people in the community, either in clinics, schools or their own homes. Approximately 100 services participate in QNCC (approximately 20% of services). The model has proved successful in establishing a common set of standards for services to work towards and has brought clinicians together to solve common problems and to share learning with each. With services completing the process every year, it is also possible to track the progress of individual units as well as identifying national trends. Comment: This contribution is part of the Workshop “Evaluation and Quality Assurance in Service Delivery for Children and Adolescents with Mental Health Problems and Mental Illness/an UEMS-CAP

perspective” (Members: G. Spiel, M. Finsterwald, P. Thompson, S. Bailey and P. Deschamps).

M2-11-S

Evaluation and quality assurance in service delivery for children/adolescents with mental health problems/mental illness: an UEMS-CAP perspective

*Spiel, Georg*¹; *Finsterwald, Monika*¹; *Thompson, Peter*²; *Bailey, Sue*³; *Deschamps, Peter*⁴

¹promente: kinder jugend familie, Austria; ²Royal College of Psychiatrists, UK; ³University of Central Lancashire, UK; ⁴UMC Utrecht, The Netherlands

Within the last years, evidence for effectiveness/efficiency in the area of healthcare is getting more and more important. Although relevant stakeholders agree that quality assurance (QA) is needed a common policy is missing. A promising approach is to benefit from standards/methods developed within the context of evaluation research (DeG-Eval, 2001). QA is especially challenging for institutions assisting children/adolescents with mental health problems. A multi method and multi-informant approach is indispensable. The UEMS/CAP has discussed QA since a couple of years. In 2009, a statement was approved by the general assembly to stimulate discussions and to provide a hallmark for initiatives in this field. Following procedure to systematize the field was agreed upon: (1) The complexity of this field should be illustrated, some general guiding principles defined; e.g., all efforts should focus on the benefit for the individual patient and his/her relatives. (2) The general structural/organizational framework in which QA takes place should be depicted; best on a meta-level to establish a QA-friendly atmosphere. (3) Distinctions should be systematically and transparently depicted; e.g. field in which QA takes place (inpatient, outpatient) or focus of the QA (individual or institutional level). (4) There should be an agreement that standards of evaluation have to be carefully monitored. (5) All evaluation should follow general guidelines. Not only relief of symptoms but also raising quality of life should be focused. The whole endeavour should be sensitive to stakeholders. (6) There should be an agreement about diagnostic and therapeutic pathways; e.g., regarding developmental disorders with CAP comorbidity, epilepsy, ADHD etc. Information about the current situation of QA in service delivery for children/adolescents with mental health problems in different countries will be presented in this workshop. Our aim is to foster/create a network of interested MH-professionals.

M3-01-PL

Controversies in ADHD

Taylor, Eric

King's college London, Institute of Psychiatry, UK

The treatment of ADHD varies considerably across countries.

This lecture focuses on significant clinical disagreements, where guidelines have been unable to produce clear recommendations because of uncertainties in the research evidence.

For how long should treatment last?

In the absence of clear scientific evidence, an individually sensitive approach will be recommended. A key consideration is the

mediators of long-term outcome: these should be targets of therapy and deserve more attention.

What is the first choice of therapy?

Evidence to be reviewed includes the meta-analyses and economic evaluations by NICE; and the extent to which treatment response is predictable and allows different algorithms for different clinical groups.

What is the place of diet treatment?

Trials of elimination of specific foodstuffs, and supplementation with long-chain polyunsaturated fatty acids, will be described. There is evidence for some such interventions being useful, not for others.

What is the place of cognitive therapies?

Cognitive therapy is frequently applied, but only occasionally recommended, because of a lack of supporting RCT evidence (except in adults). Future developments will be reviewed.

When should females be treated?

ADHD symptoms in girls are less frequent than in boys by 1:2-3. ADHD presentations in many clinics are more like 1:9. Should we seek to treat girls more frequently?

Is medication safe?

A systematic review by EUNETHYDIS has sought to quantify risks for: sudden death, cardiac arrhythmias, hypertension, deceleration of growth in height and weight, and substance misuse. Resulting knowledge of gaps in the evidence has led to EU-funded, multicentre precautionary research.

M4-01-1

The effect of warring parents on children's development

Stein, Samuel

NHS/SEPT, CAMHS Academic Unit, UK

From earliest infancy through to young adulthood, children and adolescents grow and develop according to their age and ability. This developmental pathway is influenced by a wide range of factors, and even “normal” child development varies enormously. The two main factors which may actively affect development are genetic influences and environmental influences. Genetic factors represent the inherent biological potential of the child, whilst environmental factors will influence the extent to which the child may achieve this potential. For optimal development to take place, the environment must meet the child's inbuilt physical and psychological needs. As every child is unique, children's well-being in post-divorce situations is a highly complex, interactive and multi-dimensional process that is influenced by a multitude of factors. If this process is not managed carefully, young adults from divorced families go on to display lower levels of life satisfaction, higher levels of anxiety, less trust in romantic partners, lower levels of commitment to partners and greater difficulty developing friendships. This presentation will therefore explore the impact of warring parents on their children's development from a multi-dimensional perspective, and look at ways in which these negative effects can be ameliorated. It will first look at genetic and organic influences on child development, before exploring behavioural psychology and cognitive behavioural approaches. The presentation will then look at systemic family therapy approaches, and finally psychoanalytical theory, in order to highlight the various and very different levels at which parental conflict can impact negatively on children's growth and development.

M4-02-1**Conceptual and practical approaches to the assessment and treatment of challenging behaviour in neurodevelopmental disorders***Simonoff, Emily*

King's College London, Institute of Psychiatry, Child and Adolescent Psychiatry, UK

Background: Challenging behaviour consists of highly oppositional, non-compliant behaviour and verbal and physical aggression directed at the self or others. It occurs in 10–20% of children and young people with neurodevelopmental disorders and is a common cause of inpatient admission and need for residential education and care.

Aim: This workshop will discuss the main causes of challenging behaviour, including communication problems, learned behaviour, co-occurring mental disorders and physical problems. The clinical approach to differentiating these causes will be the primary focus of the workshop.

Materials and methods: The workshop will start with a didactic overview of the theoretical and clinical aspects of challenging behaviour. Structured measures that can aid in differential diagnosis will be presented and reviewed. Case vignettes, including visual material will be used for group-based teaching. A range of different causes and treatment approaches will be highlighted in these vignettes and, particularly, links between different causes and targeted intervention will be highlighted.

Results: A clinical approach to the child or young person presenting with challenging behaviour will be reviewed. The differential diagnosis of co-occurring mental disorders, including anxiety and ADHD, will be discussed. Strategies to test hypotheses about the causation of challenging behaviours that occur less frequently (and therefore may not be observed in the clinic setting) will be covered. Measures for assessing severity of behaviour and following treatment improvement will be demonstrated.

Conclusions: The participants will have greater confidence in assessing and treating challenging behaviour and will have an evidence-based framework to follow.

M4-03-1**Parental regulation of the neural epigenome: implications for the transgenerational transmission of vulnerability***Meaney, Michael*

Sackler Program for Epigenetics and Psychobiology, Douglas Institute, McGill University, Montreal, Canada and Singapore Institute, Canada

Maternal care shapes the development adaptive behavioral and endocrine responses to stress in mammals. The mechanisms for these maternal effects¹ involve stable changes in gene expression that derive from direct effects on the epigenetic state of genomic regions that regulate the transcription of genes implicated in the regulation of stress responses. This presentation will review evidence for the epigenetic regulation of hypothalamic-pituitary-adrenal (HPA) function in human and nonhuman models. These studies support the view that environmental events can directly influence the epigenome. More recent findings from genome-wide analyses of DNA methylation in response to variations in maternal care in the rat suggest parental

influences on DNA methylation across wide regions of the genome, including genes involved in neural development. Finally, individual differences in parental care are reliably transmitted across generations in humans, nonhuman primates and rodents. In the rat, this effect is mediated by epigenetic regulation of genes implicated in the regulation of maternal care. Thus, maternal care in the rat is associated with epigenetic modifications of genes that regulate the maternal care of the female offspring, thus forming a biological basis for the non-genomic transmission of traits across generations.

M5-01-1**Vagal tone as a neurobiological marker of cognitive performance: Findings from a population cohort and clinic-referred ADHD sample. The trails study***Dietrich, Andrea; Althaus, Monika; Hoekstra, Pieter*

University of Groningen, Groningen, The Netherlands

Aim: Based on the polyvagal perspective, we examined whether higher vagal tone predicts better cognitive performance in normally developing children and children with attention deficit/hyperactivity disorder (ADHD).

Methods: Measures of executive functioning, i.e., response variability (RV) on a sustained attention task, working memory (WM), attentional flexibility (AF), and response inhibition (RI), were regressed upon vagal tone, indexed by resting respiratory sinus arrhythmia (RSA), in both a large general population ($n = 1,389$) and referred ADHD sample ($n = 210$) of 10-to-12-year-olds. Gender, pubertal stage, medication use, and respiratory power were included as covariates. Further, moderating effects of gender, stimulant medication use, and the severity, type, and comorbidity of ADHD were investigated in the ADHD sample.

Results: No significant associations between RSA and cognitive performance were found in the population sample. However, in the ADHD sample, higher resting RSA was significantly associated with slower WM ($b = 0.15$, $p < 0.05$, $R^2 = 2.1\%$), AF ($b = 0.16$, $p < 0.05$, $R^2 = 2.3\%$), and RI responses ($b = 0.25$, $p < 0.001$, $R^2 = 6.1\%$), and moreover with greater RV in ADHD combined type ($b = 0.32$, $p < 0.01$, $R^2 = 9.3\%$). Post-hoc analyses indicated an effect for AF mainly in ADHD without comorbidity ($b = 0.30$, $p < 0.05$, $R^2 = 8.1\%$).

Conclusions: We conclude that higher vagal tone may serve as a marker of poorer cognitive performance in children with ADHD. Findings are consistent with the underarousal hypothesis and cognitive-energetic model of ADHD.

M5-01-2**Val/Val genotype of brain-derived neurotrophic factor Val66Met polymorphism is associated with a better response to MPH-OROS in ADHD***Kim, Jae-Won¹; Kim, Bung-Nyun²; Cho, Soo-Churl²*

¹Seoul National University Hospital, Child and Adolescent Psychiatry, Republic of Korea; ²Seoul National University Hospital, Republic of Korea

Background: Pharmacogenetic research on psychostimulants, analysis of animal models and genetic association studies all suggest that

the Brain-Derived Neurotrophic Factor gene (*BDNF*) may be a good candidate for pharmacogenetic studies of attention deficit hyperactivity disorder (ADHD). Yet to date there have been no pharmacogenetic studies of *BDNF* in ADHD.

Aims: The present study investigated the hypothesis that MPH response may be associated with *BDNF* G196A Val66Met genotype. Specifically, we hypothesized that ADHD children with the Val/Val genotype will show a higher remission rate to treatment with MPH-OROS than ADHD children with the Met/Met or Val/Met genotypes.

Methods: 102 drug-naive ADHD children (8.7 ± 2.1 years) were treated with MPH-OROS for 12 weeks, and three kinds of response criteria were applied, based firstly on a combined threshold of the ADHD Rating Scale-IV (ARS) and the Clinical Global Impression-Improvement scale (CGI-I); secondly on scores of 1 or 2 versus 3 to 7 status on the CGI-severity scale; and thirdly on more than 50% reduction of the ARS scores.

Results: Relative to other genotypes, homozygosity for the Val-allele of the *BDNF* Val66Met polymorphism was associated with a greater relative frequency of good response under all three response criteria (after controlling for baseline ARS score, age, gender, final dose (mg/kg) of MPH-OROS at 12 weeks and level of academic functioning). This association was significant at uncorrected level for the first and third response criteria ($p = 0.013$ and $p = 0.018$, respectively) and significant at a Bonferroni corrected level for the second response criteria ($p = 0.0002$).

Conclusions: Our findings support an association between homozygosity for the Val allele of *BDNF* and better response to MPH-OROS in Korean ADHD children as assessed by three different response criteria.

M5-01-3

Symptoms of inattention, hyperactivity and impulsivity: epidemiology and correlations. Results from a Greek birth cohort up to 18 years

Kolaitis, Gerasimos¹; Palili, Alexandra²

¹Department of Child Psychiatry, Athens University Medical School, Athens, Greece; ²First Department of Pediatrics, Athens University Medical School, Athens, Greece

Objective: Research about the prevalence and continuity of inattention, hyperactivity and impulsivity (ADHD-like symptoms) from childhood (age 7) to adolescence (age 18) and associated factors in Greek youth is limited, but necessary.

Methods: Information was derived from a population-based representative sample of 11,048 newborns, followed-up at 7 and 18 years, through questionnaire surveys. After applying matching procedures, a data set of 2,695 individuals covering all the three time periods was compiled and used in this study. Pearson-2 test and multivariate logistic regression analysis were used to assess the associations between ADHD-like symptoms and various perinatal and childhood factors.

Results: At 7 years the prevalence of hyperactivity was 7%, inattention 9.5% and impulsivity 7%, while a significant decline of these symptoms was observed by 18 years (3, 7.3 and 0.3%, respectively). The male to female ratio was 3–1. Adverse perinatal factors, poor academic outcome, co-morbidity, physical punishment and more accidents and fights with peers were associated with ADHD-like symptoms at 7 years. At 18 years gender, smoking during pregnancy, maternal stress and physical punishment correlated with ADHD-like symptoms.

Conclusion: The consistence of our findings with those of others confirms the trends of these symptoms and the global nature of the

problem. Early detection and education of parents and teachers may eliminate health and mental health implications for these children.

M5-01-4

Health-related quality of life and its correlates with self-concept in children with attention deficit hyperactivity disorder

Rodopman Arman, Aype¹; Ozaner, Soner¹; Kulah, Yasemen²; Kalaça, Sibel³; Asafov, Azad¹; Berkem, Meral¹

¹Marmara University, Child and Adolescent Psychiatry, Istanbul, Turkey; ²Tekirdag State Hospital, Tekirdag, Turkey; ³Marmara University, Public Health Department, Istanbul, Turkey

Attention-deficit/hyperactivity disorder (ADHD) in children is associated with deterioration of several dimensions of health related quality of life (HRQoL), as well as the fluctuations of self-concept.

Aim: The objective of the present study is to evaluate the burden of illness of ADHD on HRQoL with respect to self-concept in children.

Materials and methods: 80 school children were diagnosed as ADHD in Marmara University Hospital Child Psychiatry Clinic, who were compared with 74 healthy controls. The children were newly diagnosed ADHD cases based on Kiddie Schedule for Affective Disorders and Schizophrenia for School Aged Children-Present and Lifetime Version. The children completed the Piers-Harris Self Concept Scale (PHSCS). Mothers completed the Child Health Questionnaire-Parent Form 50 (CHQ-PF50) for evaluating HRQoL in children. **Results:** ADHD and the control group did not differ in age (mean age 10.4 ± 2.4 vs. 10.7 ± 2.4) and sex distribution (56 vs. 42 boys). Being female and parental separation is related with lower HRQoL in ADHD group ($p < 0.05$ for both). Children with ADHD had worse psychosocial and physical HRQoL than healthy controls ($p < 0.05$). No relationship was found between academic achievement and CHQ-PF50. Psychosocial QoL scores were found significantly higher in children with ADHD-hyperactive type ($p < 0.05$). Children with ADHD report lower self-concept than controls ($p < 0.01$) and the decreasing tendency of self-concept scores in older ages was not observed, which was seen in healthy controls. Positive judgement on Happiness/satisfaction and Behavioural adjustment subscales of PHSCS appear to effect the HRQoL positively ($p < 0.01$) and adverse life events affect HRQoL negatively ($p < 0.05$) in ADHD group.

Conclusion: Low self-esteem in the presence of worse HRQoL may create difficulties in the adjustment processes of ADHD children. Families with ADHD children may be more prone to perceive HRQoL worse when there is history of adverse life events. This study is supported by Marmara University Scientific Research Projects Commission (project number: SAG-D-110411-0096).

M5-01-5

Neural correlates of social cooperation: developmental changes and specifics in ADHD

Siniatchkin, Michael¹; Steinmann, Elisabeth²; Prehn-Kristensen, Alexander²; Stephani, Ulrich²; Gerber, Wolf-Dieter²

¹Philipps-University of Marburg, Clinic for Child and Adolescent Psychiatry, Marburg, Germany; ²Christian-Albrechts-University of Kiel, Kiel, Germany

Objectives: One of the important prerequisites for a successful social interaction is the willingness of each individual for social cooperation. Using Ultimatum game, several studies have demonstrated that the process of decision-making to cooperate or to defeat in interaction

with a partner is associated with activation of the dorsolateral prefrontal cortex (DLPFC), anterior cingulate cortex (ACC), insula, superior temporal sulcus (STS). This study investigates developmental changes in the neuronal network of reciprocal cooperation and its specifics in ADHD.

Methods: 15 healthy children, 15 healthy adults and 18 ADHD patients were investigated using Ultimatum game (contact with a real player before the game, fair offers 5:5, unfair offers 3:7 and 1:9, play with human or computer). Neuronal networks of social cooperation were characterized using functional MRI (3T Philips; TR = 2250 ms, TE = 45 ms, 30 slices, SPM-5, all results $p < 0.001$ non-corrected).

Results: In all groups, the process of decision-making in reaction on unfair offers was associated with haemodynamic changes in the DLPFC, ACC and insula. However, in healthy adults the decision-making was accompanied by a significant activation in the posterior STS and inferior frontal cortex (IFC)—brain regions closely related to empathy. Healthy children did not show activation in the STS and IFC and did not differentiate between interaction with a human or a computer. Children with ADHD demonstrated a typical network activation only in interaction with a human.

Conclusion: The process of decision-making during social interaction in adults is associated with the stronger involvement of neural structures which are usually active during empathy, compared with children. It seems likely that adults try more to anticipate and forecast the behavior of a partner during interaction than the children that do. Moreover, children with ADHD are characterized by an increased sensitivity to psychosocial context.

M5-01-6

Rainbow Diaries: an innovative approach to identifying ADHD

Stein, Samuel

NHS/SEPT, CAMHS Academic Unit, Bournemouth, UK

ADHD is a complex neuro-developmental disorder characterised by developmentally inappropriate attention, hyperactivity and impulsivity. Unfortunately, there is no single test for diagnosing ADHD. Instead, a range of questionnaires have been developed to assist with assessment and diagnosis, including the Conners Rating Scales, SNAP-IV, ADHD Rating Scale-IV, Vanderbilt ADHD Teachers/Parent Rating Scale and ADHD Symptoms Rating Scale. However, these rating scales often ask the parents or teachers to answer very general questions relating to non-specific behaviours that took place a week ago, several months ago, in the last year or even over the child's lifetime. The Rainbow Diary is designed to track adverse behaviour, as it happens, from when the child wakes up until they go to bed. What often emerges is that hyperactive outbursts are not unpredictable or unprovoked. The diary sheets can highlight this escalating pattern, as well as occasions on which the escalation has been prevented by vigilant interventions. A set of early warning signals can also be identified which allow adults to predict potential outbursts. In addition, the diary sheets help to identify sources of adverse behaviours, such as times of day, days of the week, specific activities, stressful events, particular lessons or even individual teachers. The Rainbow Diaries therefore provide a unique and innovative approach to assessing adverse behaviour as it occurs, highlighting possible social and environmental causes that may otherwise be missed, and identifying escalating patterns of interaction at home and school. The diaries are not dependent on accurate recollection of past events, and are of direct use in treatment and prevention. The benefit of using these diaries, and their significant impact on clinical care, will be the focus of the paper/workshop/poster.

M5-02-1

Stress reactivity and early onset of substance use-findings from two studies

Huizink, Anja¹; Prince van Leeuwen, Andrea²; Evans, Brittany³; Euser, Anja⁴; Greaves-Lord, Kirstin³; Franken, Ingmar⁴; Creemers, Hanneke²; Ormel, Johan⁵; Verhulst, Frank³

¹University of Amsterdam, Research Institute of Child Development and Educat, Amsterdam, The Netherlands; ²University of Amsterdam, Amsterdam, The Netherlands; ³Erasmus Medical Center, Rotterdam, The Netherlands; ⁴Erasmus University Rotterdam, Rotterdam, The Netherlands; ⁵University Medical Centre Groningen, Groningen, The Netherlands

Studies in adult populations suggest that vulnerability to stress, assessed with basal functioning of the hypothalamic-pituitary-adrenal (HPA) axis or with HPA axis reactivity, is related to substance (ab)use. Indeed, numerous studies have shown that HPA axis functioning is dysregulated in people who have developed a dependence on alcohol, nicotine or illicit drugs. Alternatively, some studies have shown that augmented stress reactivity of the HPA axis is associated with more frequent smoking and drinking. These studies raise the question of whether the different reactivity is a consequence of addiction, or a biomarker of people at risk for addiction. To gain further insight into how individual variation in HPA axis functioning is related to substance (ab)use from adolescence onwards, we conducted two prospective longitudinal studies in the Netherlands. Our first study of $n = 1,768$ adolescents aged 11 years who participated in the TRacking Adolescents' Individual Lives Survey (TRAILS) study showed that lower basal cortisol levels 30 min after awakening were related to early onset of tobacco and cannabis use. A subsample ($n = 591$) performed the Groningen Social Stress Task at age 16, in which their HPA axis reactivity was tested. Findings showed that lifetime cannabis users had significantly lower stress reactivity levels when compared to abstainers (OR = 0.68, CI = 0.55–0.85, $p < 0.01$) and lifetime tobacco users (OR = 0.79, CI = 0.64–0.98, $p < 0.05$). In addition, repeated cannabis users also exhibited lower stress reactivity levels when compared to lifetime ever substance users (OR = 0.74, CI = 0.53–0.98, $p < 0.05$). Similarly, study 2 ($N = 346$) showed that adolescents who began drinking at an earlier age showed attenuated stress cortisol levels ($R^2 = 0.11$, $p = 0.03$). Both population-based studies thus show evidence for an under-arousal of the HPA axis in resting conditions and during a stress procedure as an index of individual vulnerability to (early) onset of substance use.

M5-02-2

Early cigarette smoking and externalizing behaviors as predictors of illicit drug use in adolescence: evidence from the Finntwin12 cohort

Korhonen, Tellervo¹; Dick, Danielle²; Huizink, Anja³; Kaprio, Jaakko⁴; Latvala, Antti⁴; Levälähti, Esko⁴; Pulkkinen, Lea⁵; Rose, Richard⁶

¹Department of Public Health, University of Helsinki, Helsinki, Finland; ²Virginia Commonwealth University, USA; ³University of Amsterdam, Amsterdam, The Netherlands; ⁴University of Helsinki, Helsinki, Finland; ⁵Professor Emerita, Finland; ⁶University of Bloomington, USA

We review evidence on drug use predictors from the FinnTwin12 and Dutch Vidi—projects. The data were collected at ages 12, 14 and 17 (14% initiated drug use by age 17). Predictors of illicit drugs were female sex, early smoking onset, binge drinking, peers with tobacco and drug experience; father's weekly binge drinking and aggressive behavior. Smoking onset by age 12 was a powerful predictor, which motivated exploring causal nature of association. We compared model describing direct impact of liability to tobacco use on illicit drug use with model including shared liability for both substances. Model including direct impact of tobacco on drugs had the best data fit. To the next studies we added externalizing behaviors (hyperactivity–impulsivity, aggressiveness, inattention). We explored if externalizing behaviors (age 12) predict illicit drug use independently or if their associations with drugs are mediated via tobacco use (age 14). The association of hyperactivity–impulsivity with drugs was mediated via tobacco. For aggressiveness and inattention, girls showed no mediation, but in boys more mediation was seen. Consistently, the direct association of early cigarette smoking on drugs was significant. Finally, we used studied genetic and environmental influences on externalizing behaviors, smoking and drugs. Heritability of externalizing behavior was 52% in boys and 58% in girls; smoking 34% in boys, 9% in girls; drugs 24% in boys, 26% in girls. In the best-fitting models, common environmental (C) influences explained most of the covariance between externalizing behaviors and smoking in girls/boys (64/70%). Covariance between smoking and drugs was due to genetic (A) (49%) and C (51%) in boys, but C (94%) and unique environmental (E) (6%) in girls. Covariance between externalizing behaviors and drugs was fully explained by A in boys, but C in girls. Different pathways for boys and girls underlie the associations between externalizing behaviors, smoking and drugs.

M5-02-3

Gender differences in risk pathways for adolescent substance abuse and early adult alcoholism

Rose, Richard J.

Indiana University, Psychological and Brain Sciences, Bloomington, USA

Longitudinal studies of Finnish twins yield evidence of gender differences in risk pathways for adolescent substance use and related adult outcomes. The evidence is from epidemiological studies of twins as individuals and from analyses of twin data for genetic and environmental effects on substance use as modulated by contextual environments. Girls are more susceptible to reduced parental monitoring and more influenced by substance-using peers. At age 14, drinking patterns of girls, but not boys, is significantly greater in urban residential neighborhoods, in those characterized by higher rates of migration and more teens, ages 15–19. Among girls, but not boys, these neighborhood factors significantly modulate genetic and environmental effects on teacher-rated aggression, impulsivity, and inattention—behaviors that enhance risk for substance use. Teacher-rated symptoms of ADHD at ages 11–12 are less common among girls, but only in females do these

symptoms strongly predict alcohol abuse/dependence symptoms on follow-up at age 14 and illicit drug use at age 17, after controlling for conduct disorder and previous substance use. Other analyses find drinking-related problems at age 18 more predictive of interview-diagnosed alcoholism at age 25 for females; further, within-family comparisons of twin sisters and twin brothers discordant for both predictor and outcome confirm the stronger predictive association for females between age 18 drinking problems and later alcoholism. These consistent results imply greater susceptibility of adolescent females to common risk factors for substance use, their greater likelihood of diagnosed alcoholism from problem drinking in late adolescence, and gender differences in pathways from early behavioral precursors to later drinking-related problems. Whether similar gender differences in pathways and consequences of substance abuse persist into later adulthood is less certain, but we are engaged in the necessary follow-up.

M5-02-4

Why do ADHD symptoms and reading difficulties co-occur?

Greven, Corina; Asherson, Philip; Trzaskowski, Maciej; Rijdsdijk, Fröhling; Plomin, Robert

King's College London, Institute of Psychiatry, Social, Genetic and Developmental Psychiatry Centre, London, UK

Background: Children with attention deficit hyperactivity disorder (ADHD) often experience reading difficulties. In particular, inattentiveness rather than hyperactivity-impulsivity is linked to reading difficulties. Quantitative genetic studies indicate that this is largely due to shared genetic influences between the inattentive symptoms of ADHD and reading difficulties.

Aim: To examine two questions about the genetic association between ADHD symptoms and reading difficulties. First, does the association extend to aspects of scholastic achievement other than reading, as predicted by the Generalist Genes Hypothesis? Second, what are the longitudinal, potentially causal, relationships underlying ADHD symptoms and reading difficulties?

Materials and methods: ADHD symptoms and reading in over 6,000 twin pairs from the UK population-representative Twins Early Development Study were assessed across middle childhood to early adolescence. ADHD symptoms were assessed using the Revised Conners' Parent Rating Scale. Scholastic achievement was assessed using teacher ratings.

Results: The genetic association between ADHD symptoms and reading difficulties was similar to that for ADHD symptoms and other aspects of scholastic achievement. Quantitative genetic cross-lagged results showed that ADHD symptoms, in particular inattentiveness, contributed significantly to later reading difficulties, whereas the reverse effect was half the magnitude.

Conclusion: The genetic links between inattentive ADHD symptoms and reading largely extend to other aspects of scholastic achievement. Moreover links appear to be causal from inattentiveness to reading, suggesting that inattentiveness may serve to exacerbate reading difficulties across time. We are currently testing our quantitative genetic results using genome-wide association analyses.

M5-02-5 Trends in results of genome-wide association studies for substance use

Boomsma, Dorret¹; Vink, Jacqueline¹; de Geus, Eco J.C.¹; Sullivan, Patrick²; Furberg, Helena³; Willemsen, Gonneke¹; Hottenga, Jouke Jan¹; de Moor, Marleen¹; Distel, Marijn¹; Neale, Michael⁴; Smit, Johannes⁵; Hoogendijk, Witte⁵; Zitman, Frans⁶

¹Department of Biological Psychology, VU University, Amsterdam, The Netherlands; ²Department of Genetics and Psychiatry, University of North Carolina, Greensboro, USA; ³Memorial Sloan-Kettering Cancer Centre, New York, USA; ⁴Virginia Commonwealth University School of Medicine, Virginia Institute for Psychiatric and Behavioral Genetics, Richmond, USA; ⁵Department of Psychiatry, VU University Medical Centre, Amsterdam, The Netherlands; ⁶Department of Psychiatry, Leiden University Medical Centre, Leiden, The Netherlands

Background: Twin studies have shown that substance use like nicotine-, alcohol- and cannabis consumption is partly influenced by genetic factors (e.g. Vink et al. 2005). Genome-wide linkage and association analyses now try to find the genes involved in substance use and abuse.

Aim: We will present an overview of the current results of genome-wide gene finding studies for smoking, alcohol, cannabis, and coffee use, including the studies that originate from the Netherlands Twin Register. Follow-up approaches such as pathway analyses are shown to add to the interpretation of results (e.g. Vink et al. 2009). In addition, we explore genetic co-morbidity between smoking and alcohol consumption.

Materials and methods: The phenotypic and genetic correlations between smoking and alcohol consumption will be examined in data from the Netherlands Twin Register. Next, we will investigate whether a genetic risk score for smoking based on a meta-analysis of genome-wide association studies of smoking the TAG consortium (TAG consortium 2010) can predict alcohol use in a subjects from the Netherlands Twin Register.

Results and conclusions: Genome-wide studies for substance use have revealed some interesting regions and suggestive genes. For complex behavior like substance use, it is likely that individuals are at risk for substance use through multiple genetic variants, possibly acting on different proteins in certain functional networks. We discuss how a network-based GWA approach can identify genes influencing smoking behavior and compare this to an alternative approach employing genetic risk scores.

References:

1. Vink et al. (2005) *Behavior Genet* 35(4):397–406
2. Vink et al (2009) *Am J Human Genet* 84:1–13
3. TAG Consortium (2010) *Nat Genet* 42(5):441–447
4. International Schizophrenia Consortium (2009) *Nature* 460:748–752

M5-02-S Genetic and environmental influences on the development of substance abuse problems: evidence from longitudinal cohort and twin studies

Kaprio, Jaakko

Department of Public Health, University of Helsinki, Helsinki, Finland

The symposium will consist of four talks on the theme of development of substance use and abuse illustrated by data from large, prospective European studies of children, adolescents and young adults. Anja Huizink will talk on “Stress reactivity and early onset of substance use-findings from two studies”. Using two population-based studies from the Netherlands, she demonstrates evidence for an under-arousal of the HPA axis in resting conditions and during a stress procedure as an index of individual vulnerability to (early) onset of substance use and repeated use during adolescence. Tellervo Korhonen in her talk “Early Cigarette Smoking and Externalizing Behaviors as Predictors of illicit Drug Use in Adolescence: Evidence from the Finntwin12 Cohort” will summarize a series of papers on risk factors for adolescent substance use and abuse in the longitudinal Finntwin12 cohort from Finland and the VIDI-cohort in the Netherlands. As smoking initiation by age 12 was a very powerful predictor of cannabis use, this finding motivated further exploration of the causal nature of the association. The analyses suggest that different pathways for boys and girls underlie the associations between externalizing behaviors, smoking and drugs. Richard J Rose will speak about “Gender Differences in Risk Pathways for Smoking, Drinking and Later Outcomes” highlighting greater susceptibility of females to a variety of risk factors for smoking and drinking and gender differences in pathways from personality at 16 and 17 to later drinking problems. The last speaker is Jacqueline Vink who will present novel results from genome-wide association analyses of smoking and drinking based on the Netherlands Twin Registry in her talk “Trends in results of genome-wide association studies for substance use”.

M5-04-1 Using science to improve preventive policies

Rutter, Michael

Institute of Psychiatry, King’s College London, Social, Genetic and Developmental Psychiatry Centre, London, UK

Prevention may be designed to reduce the level (or the impact) of serious risk experiences (such as abuse or neglect), to improve the ways in which children cope with such adverse experiences, or to intervene at an early point in the development of psychopathology before it becomes established. The paper will seek to provide a succinct overview of the key scientific issues that need to underlie preventive policies. These include the evidence that protection often lies in the appropriate exposure to manageable hazards and not in their avoidance; the evidence on heterogeneity in susceptibility to environmental hazards; gene-environment interplay in the phenomenon of resilience; biomarkers as a possible way of identifying the early development of psychopathology; the biological embedding of experiences; and the possibility of intervention-induced gains in functioning after the early years.

M5-04-2 Prevention of offspring mental disorders in families with parental mental illness: from families to systems

Solantaus, Tytti¹; Paavonen, Juulia²; Sipilä, Marianne²; Toikka, Sini³

¹National Institute of Health and Welfare, Child and Adolescent Mental Health, Finland; ²National Institute for Health and Welfare, Child and Adolescent Mental Health, Finland; ³Finland’s Slot Machine Association, Finland

Children of parents with mental health disorders have both genetic and environmental risks for increased psychiatric morbidity. These children and families are within the reach of systematic support, when the parents seek help in psychiatric services. This paper presents a ten-year development and research programme in Finland to induce a system change in psychiatric services for adults to attend to the needs of the patients' families and children, including needs for child protection, child psychiatric treatment, and support for parenting and child development.

The research arm of the Effective Child and Family programme has shown that the methods used are safe and feasible. The randomised trial with 119 families suggests a positive impact on children's symptoms. Psychiatric clinics have started to train their staff and to include patients' children in clinical routines and good practice guidelines. The work is expanding to substance use services and health services for severely somatically ill parents. The governmental Mental Health and Substance Use Plan and the new Health Care Act, in place on May 1, 2011, oblige health services for adults to attend to children's needs for care and support, when a parent suffers from mental health or substance abuse problems, or from severe somatic conditions.

Agents for the change are discussed, e.g. respectful and destigmatizing approach to the ill parent; extensive supervision; immediate benefits and documented effectiveness; the training of trainers across the country; trainers' network and annual seminars for practitioners. Last but not least, the role of risk taking and chance will also be discussed, as well as ongoing challenges of quality control and interaction between practice and the ever growing body of research knowledge.

M5-04-3

Nationwide dissemination of evidence-based parenting programmes to improve child mental health: many a slip twixt cup and lip

Scott, Stephen

Institute of Psychiatry, Kings College London, London, UK

This talk will review what needs to happen to implement the transition from good clinical practice in individual cases to nationwide dissemination. While small trials with relatively severe cases of child antisocial behaviour show good effects, moving up to widespread roll out across a whole country is much harder to achieve effectively. Some of the barriers encountered in England when trying to do this will be illustrated, and steps needed to overcome them. They include (1) the upfront cost of running programmes versus the long-term economic cost of not treating cases (2) deciding whether to select all children, or to target those with worse problems (3) setting up the training of practitioners in approaches that work (4) persuading local commissioners and politicians to choose evidence-based programmes rather than local favourites with no evidence of effectiveness (5) the crucial role of practitioner skill and the need for supervision (6) how to encourage high attendance by parents (7) what to do with treatment resistant cases. Our own experience will be described, including outcomes from our own randomised trials.

References:

1. Scott S (2010) National dissemination of effective parenting programmes to improve child outcomes. *Br J Psychiatry* 196,1–3
2. Scott S, Sylva K, Doolan M, Price J, Jacobs B, Crook C, Landau S (2010) Randomized controlled trial of parent groups for child antisocial behaviour targeting multiple risk factors: the SPOKES project. *J Child Psychol Psychiatry* 51,48–57

3. Scott S, Dadds M (2009) When parent training does not work: theory-driven clinical strategies. *J Child Psychol Psychiatry* 50,1441–1450

M5-04-4

From authority- to evidence-based practice: the evidence management system of Sweden

Sundell, Knut

The National Board of Health and Welfare, Sweden

The Swedish social care services, including child and adolescent mental health, are becoming less opinion-based and more evidence-based. This process is part of larger policy-driven processes that promotes the use of evidence-based practices in Sweden, and that goes back to the 1990. Key change drivers are defining fundamental concept, greater transparency of existing practice and public research spending, promoting outcome studies, synthesizing and disseminating evidence in the form of science-based national guidelines and a national clearinghouse, supporting local implementation through training and strategic assessment tools, and systems for local monitoring and open comparisons based on quality indicators. Significant change agents are single governmental officials, some leading National authorities as well as the Swedish government in itself.

M5-04-S

Challenges and prospects of prevention in child and adolescent mental health

Solantaus, Tytti¹; Rutter, Sir Michael²; Scott, Stephen³; Sundell, Knut⁴

¹National Institute for Health and Welfare, Child and Adolescent Mental Health, Finland; ²Institute of Psychiatry, Social, Genetic and Developmental Psychiatry Centre, UK; ³Institute of Psychiatry, King's College, National Academy for Parenting Research, UK; ⁴Department of Knowledge Based Policy and Guidance, National Board of Health and Welfare, Sweden

This symposium on prevention presents an interchange between the scientific foundation of prevention, research concerning methods and implementation and the development of services and policy. We will highlight advances and point out challenges.

Prof. Sir Michael Rutter (Using science to improve preventive policies) provides an overview of the scientific issues needed to underlie preventive policies. These include, e.g., evidence of heterogeneity of susceptibility, gene-environment interplay in resilience and the evidence of protection not being due to avoidance of the hazard. Prof. Solantaus (Prevention of offspring mental disorders in families with parental mental illness: from families to systems) reviews a nationwide prevention effort in Finland, including the research, issues of implementation and change in thinking that are needed to have the psychiatric service system for adults embrace also the patients' children. Prof. Scott (Nationwide dissemination of evidence-based parenting programmes to improve child mental health: many a slip twixt cup and lip) highlights what needs to happen to implement the transition from good clinical practice in individual cases to nationwide dissemination. Barriers related to decision making, economy and practitioners and families themselves will be discussed. Evidence from randomised trials concerning parenting programmes in England will be presented. Prof.

Sundell (From authority—to evidence-based practice, the evidence management system of Sweden) reviews governmental activities in Sweden, which aim to move the services for child and adolescent mental health towards more evidence based practice. The principles and the key change agents are discussed. The issues raised will be discussed among the presenters with questions from the audience.

M5-05-1

Severe physical punishment: risk of mental health problems for poor urban children in Brazil

Bordin, Isabel A.¹; Duarte, Cristiane S.²; Curto, Bartira M.¹; Paula, Cristiane S.³

¹Department of Psychiatry, Universidade Federal de São Paulo, Brazil; ²Columbia University, New York State Psychiatric Institute, USA; ³Universidade Presbiteriana Mackenzie, Brazil

Objective: To examine the relationship between specific types of child mental health problems and severe physical punishment (SPP), in combination with other important known risk factors.

Methods: We conducted a cross-sectional study in Embu, São Paulo, as the Brazilian component of a multicountry survey on abuse in the family environment. From a probabilistic sample of clusters that included all eligible households (women aged 15–49 years with a son/daughter <18 years), we randomly selected one mother-child pair per household (n = 813; response rate: 82.4%). This study focused on children aged 6–17 years (n = 480). The Child Behavior Checklist was used to identify children with internalizing problems only, externalizing problems only, and both internalizing and externalizing problems (comorbidity). SPP was defined as being hit with an object, being kicked, choked, smothered, burnt/scalded/branded, beaten or threatened with a weapon. We examined other potential correlates from four domains: child (gender, age, ever witnessing marital violence); mother (education, unemployment, anxiety/depression, marital violence); father (absence, drunkenness); and family (socio-economic status). The WHO Self-Reporting Questionnaire (SRQ-20) was used to identify maternal anxiety/depression (score > 7).

Findings: Multivariate modeling showed that SPP was an independent correlate of comorbid internalizing and externalizing problems but was not associated with internalizing problems only. It increased the risk of externalizing problems alone only for children/adolescents not exposed to maternal anxiety/depression. Maternal anxiety/depression increased the risk only for children/adolescents not exposed to SPP.

Conclusion: SPP may be related to child mental health problems, with the mechanism depending on the type of problem. Its influence persists in the presence of family stressors such as the father's absence and maternal anxiety/depression.

M5-05-2

Association between childhood family violence and physical child abuse in adulthood: findings from World Mental Health Survey Japan

Umeda, Maki; Kawakami, Norito; World Mental Health Japan, Survey Group

Department of Mental Health, The University of Tokyo, Japan

Background: Few existing studies on “intergenerational transmission of violence” examined the association between childhood family violence and adulthood physical abuse adjusting for co-occurring childhood adversities separately for men and women. Cross-nationally comparative studies were needed to verify the association.

Aim: This study examined the unique association of two types of family violence, childhood physical abuse and inter-parental violence, with adulthood child physical abuse stratified on genders.

Methods: A randomly selected community residents aged 20 or older in Japan were interviewed using the WHO Composite International Diagnostic Interview 3.0 (n = 4,134, response rate = 55.1%). The subjects of this study were a subsample who ever had children and responded to the longer version of interview (n = 1,682). Firstly, bivariate associations of childhood physical abuse or inter-parental violence with adulthood physical child abuse were examined. Secondly, childhood adversities, such as maltreatment, parental maladjustment, parental loss, physical illness and poverty, were simultaneously included in the model. All models were analyzed using multiple logistic regression, adjusting for age, number of children, employment, household income, respondent's education and parents' education.

Results: After adjusting for the other childhood adversities, physical abuse was significantly associated with adulthood physical child abuse among both men (OR = 12.5; CI = 3.4–46.5) and women (OR = 3.0; CI = 1.0–8.9). Inter-parental violence was significantly associated only among men (OR = 7.2; OR = 2.0–26.2) in the bivariate analysis, but the association drastically decreased to be non significant after adjusting for the childhood adversities.

Conclusions: The physical abuse-to-physical abuse intergenerational transmission was found in a Japanese community sample. Inter-parental violence was related to male adulthood physical child abuse, possibly mediated by other childhood adversities.

M5-05-3

Child abuse and the child and adolescent psychiatrist: do we need a new approach?

Van Hoof, Marie-José

GGZ Kinderen en Jeugd Rivierduinen, Child and Adolescent, The Netherlands

Child abuse and neglect have long been neglected in the child psychiatric caseload at least in The Netherlands. Only fairly recently the attention of society and politics has turned towards children's rights and the need of prevention, risk signaling and diagnostics and treatment in case of child abuse and neglect. Now a move has been made towards more professional involvement from child and adult psychiatrists by revising the code for doctors, especially psychiatrists, to mention cases to the authorities. Besides a national working committee on trauma and child abuse has seen the light. This working committee has gathered information on the topic on the website of the Knowledge Center for child and adolescent psychiatry which will be made available in English as soon as possible. There will be time to discuss this approach with the audience as a way of taking responsibility for the children at risk in our caseloads as psychiatrists or medical doctors.

M5-05-4 Child abuse in Brazil: focusing on the problem of pedophilia

Rodrigues, Herbert

Department of Sociology, University of São Paulo (USP), Brazil

Pedophilia has become a problem discussed in several areas of knowledge, and the general public has increasingly been concerned about this issue. There is no consensus on the subject of pedophilia, which has been understood both as a disease and as a crime. This proposal intends to carry out a genealogy of understanding about pedophilia, and discuss the process of criminalization of the pedophilia in Brazil based on analysis of the discursive production on the field of psychiatry and the law, which pedophilia has been seen as an object of knowledge and discussion. The objective is to analyze how child sex abuse has been isolated and classified for the medical-psychiatric discourse and how the notions and concepts are formed to define child sex abuse as a crime within the criminal justice discourse. The problem fits precisely in the production of knowledge medical and legal. I intent to present an analysis of documents that form the discourses on child sex abuse in Brazil, such as reports of psychiatrists, legislation and cases found in courts of law to carry out a genealogy that seeks to reconstruct the process of criminalization of pedophilia in Brazil.

M5-06-1 Excalibur: Multi-agency intervention and support barometer

Stein, Samuel

NHS/SEPT, CAMHS, UK

Over the past decade, heavy criticism has been directed towards mental health and social care services for failing to manage children and families at risk more effectively. Unfortunately, traditional risk assessment tools have proved to generally be of limited usefulness, especially as they struggle to address multiple risks within a single measure and fail to facilitate effective communication between different professionals and agencies. However, adverse incidents can be reduced by sensible contingency planning, and risk assessment is therefore a national clinical governance expectation. This needs to be seen as the assessment of current or past situations, and not as a predictor of particular future events. Risk management should also be conducted in a spirit of collaboration with service user, building on their strengths and emphasising recovery. Recognising these problems, the Multi-Agency Intervention and Support Barometer has been designed to provide a unique but comprehensive approach to risk management. It utilizes a broad-based clinical approach, in a user-friendly format, with major emphasis on intervention and recovery rather than on risk identification alone. The barometer also promotes follow-through from assessment onwards, and provides effective communication across agencies. In addition, the barometer allows for easy updating, and tracking of changes over time, with findings that can be reviewed as simple graphs. Emergency alerts are also automatically triggered when patients score very highly on the risk factors being measured. If integrated into health and social care, the barometer will actively reduce risk whilst also providing essential support for vulnerable children and families. The aim of

this presentation is therefore to highlight the underlying rationale behind the approach, and to provide detailed guidance as to how it can be implemented in both clinically effective and cost effective ways across a whole range of community settings.

M5-06-2 The price that children pay in the daily search for food in Soweto slums-Uganda

Muramizi, Wahab; Okoth, Geoffrey

Mulago Nursing School, Nursing, Uganda

A healthy diet is the key to normal growth and development in infancy and childhood and is the foundation to adulthood. Communities have absorbed these children in extended families with the desire to help them. The responsibility of raising these children is not easy and provision of food and other basic needs is a daily predicament in Soweto slums and most parts of Uganda at large.

Purpose of study: This paper will discuss the risks that children encounter in their daily struggle and that of their families to provide food in Soweto slums in Kampala Uganda.

Methods: Direct observation of the daily activities revolving around the children in Soweto slums were observed for fourteen consecutive days of the week. Cluster and simple random sampling methods were used to select 40 willing participants. Questionnaires were administered to adults and children.

Study design: cross-sectional descriptive study.

Results: Observation results showed that major activities in Soweto were driven by the dire need to provide at least a meal at the end of each day. In the daily struggle to provide food children were directly exposed to hunger, diseases, injuries, child labour, neglect, drug abuse, sexual abuse and child sacrifice. The residents used water from tunnels and Nakivubo channel for daily domestic use. The interview showed that hunger, injuries and diseases were the greatest risks. Neglect and child labour was the second greatest risk followed by drug abuse, sexual abuse and child sacrifice.

Conclusion: Majority of children are at a high risk of contracting diseases, injuries, child labour, neglect, drug abuse, sexual abuse, and child sacrifice. These risks are as a result of the struggle to earn daily living.

Recommendations: Collaborative approach in provision of safe water, food and community safe playgrounds. Strengthen Advocacy for the rights of children, draw attention to the possibility of a safe childhood in Soweto slums.

M5-06-3 Implementing routine outcome monitoring in a CAMH Service in The Netherlands: trials and tribulations

Klasen, Henriikje¹; Noom, Marc J.²; Zeyl, Manon³

¹GGZ Kinderen en Jeugd Rivierduinen, The Netherlands;

²Leiden University Medical Centre, The Netherlands; ³GGZ Kinderen en Jeugd Rivierduinen, The Netherlands

Background: The question whether our efforts in child psychiatry bring about the desired results stands increasingly central in our work.

From a scientific and pragmatic perspective we need to collect more “practice based evidence” about the effects of ordinary treatments (not always 100% standardized) on ordinary patients (with co-morbidities, bad compliance and fuzzy diagnoses). From a societal and economic perspective we need to show whether our treatments really work. However, so far most CAMH services in Europe do not yet systematically evaluate treatment outcomes and implementation of routine outcome monitoring (ROM) can be complex as this example from the Netherlands shows.

Aims: We will describe the process and approximate costs of a ROM project from 2006 to 2010 in which ca. 300 youths aged 14–16 with emotional disorders received repeated ROM measures at three monthly intervals throughout their outpatient treatment. We will firstly investigate how well ROM was actually implemented: i.e. how many of the eligible patients actually received the appropriate number of ROM measures. Secondly we will look at descriptive characteristics: diagnosis, age, ethnicity and social background of patients who received ROM and those who did not.

Methods: Data from the ROM database are compared to data from the electronic patient dossiers (EPD). The EPD shows all patients eligible for ROM with diagnoses, length of treatment and psychosocial data, while the ROM database gives details on standardized outcome measures.

Results/conclusions: From the approximately 400 patients eligible for ROM ca. 300 actually received at least one ROM measurement. At each subsequent point ca. 25% of patients fell out of the process. We will describe characteristics of those completing ROM and those falling away. We also use the results to discuss some core controversies of ROM: WHO should collect WHICH DATA, WHEN and on WHICH PATIENTS?

M5-06-5

An open trial of families and schools together (FAST), The Netherlands: a school based, multifamily intervention to prevent child mental health problems

Klasen, Henrikje¹; Bohne, Erica²; Overgaag, Marleen¹

¹GGZ Kinderen en Jeugd Rivierduinen, The Netherlands; ²Leiden University, The Netherlands

Background: Families who are socially marginalized, i.e. through poverty, ethnic minority status or social isolation are often reluctant to consult child mental health services even though their children are at greater risk to develop psychiatric disorders than the average population. The reason can be lack of information as well as the real or imagined fear to be blamed for the child’s problems. Offering these children and their families an intervention at school is a low threshold way of engagement. Families and Schools Together (FAST) is an evidence based prevention program, where groups of 6–12 whole families are seen together for a period of eight weekly sessions by a multi-agency team of mental health, social service and educational workers. Four previous RCTs in the USA have shown that the program reduces internalizing and externalizing behaviors and strengthens family and social relationships. It was also shown to be particularly good at recruiting and retaining marginalized families.

Aims: To adapt FAST to the Dutch situation, to assess feasibility of further studies or large scale implementation and to evaluate outcomes.

Methods: 24 families participated in one of three subsequent FAST groups with 21 families completing the whole program. Standardized outcome measures were taken from parents and teachers before and after the intervention. The information was supplemented through qualitative data from parents, children and participating agencies.

Results: Significant improvements of family and social relationships were reported by parents, who also saw significant improvements in child behavior. Teachers reported a trend towards reduced difficulties in child behavior. The evaluation of feasibility showed that the program was well liked by families, but seen as quite complex and costly by participating agencies, especially by schools. A practical hindrance to implementation is that funding issues between the three involved agencies are difficult to resolve.

M5-07-1

A Child and Adolescent Mental Health Clinical Academic Group: a model of integration across clinical services, research and education

Milavic, Gordana

National and Specialist Services, South London and Maudsley NHS Foundation Trust, UK

The history of the development of Child and Adolescent Mental Health Services (CAMHS) in the UK has been one of shoe-string budgets and idiosyncratic practice dating back to the days of the child guidance movement. The services have veered from alliances with adult mental health to partnerships with paediatric services depending on local health arrangements. The report *Together We Stand*, published in 1995, (1) set out a new vision of comprehensive CAMHS resulting in the expansion and reorganisation of services over the last 15 years. This talk will focus on the organisation of the CAMHS Clinical Academic Group in the South London and Maudsley NHS Foundation Trust—the largest CAMHS in the country covering a resident population of over 1.2 M and 240,000 children and young people under the age of 18 in addition to providing national services. A model integrating clinical work, service delivery, education and research will be described. Specific reference will be made to the development of care pathways, CAMHS tariffs, quality improvement, innovation and improved satisfaction with services. The world wide recession trends have rendered the services vulnerable once again and efficiency savings continue to feature in strategic planning. Commissioning of services and partnership working with other agencies including both referrers and users of the services will be described.

M5-07-2

Mental health care for children and adolescents in the Netherlands: how much do we care for child-psychiatry in 2020?

Lahuis, Bertine

Karakter, Hospital for Child- and Adolescent Psychiatry, Nijmegen, The Netherlands

In the year 2010 around 4.5 million children and adolescents were living in the Netherlands. From this quantity 5% reveals mental health problems interacting with their daily life. In recent years the growth of care consumption is declining (9% in 2008 >5% in 2009): in 2009 waiting lists were reduced (10%) and costs were lowered (with 2%). People from low-social class and non-natives are underrepresented in making use of psychiatric care services. Most patients were referred to child psychiatric services by their general practitioner (44%) or

pediatrician (21%). Every year 500 million euros are spent on child and adolescent psychiatric care in the Netherlands. Karakter is one of the larger specialist child psychiatric care hospitals in the Netherlands providing general and academic (specialized) care, education of professionals and research. Focus in the coming years is on developing care pathways, creating alliances with other health suppliers and realizing (clinical) innovative research. In the recent past the Dutch government stimulated accessibility and availability of mental health care. Today declining financial possibilities do restrict the ongoing growth in demand for child mental health care. To be able to continue providing the necessary care fundamental changes are required in how we structure our health care system, in how we organize our work and in the underlying care culture, including paradigm shifts. At this moment child psychiatric care is integral part of the regular medical care system. The Dutch political environment nowadays however has proposed to shift the responsibility of organizing and providing child psychiatry from the central government (by means of national insurance companies) to the local government. This will lead to immense changes in child psychiatry organizations and could implicate a risk for the availability and quality of mental health care in the Netherlands.

M5-07-3

Mental health services for adolescents

Anagnostopoulos, Dimitris¹; Soumaki, Eugenia²

¹University of Athens, Athens, Greece; ²Institute of Eating Disorders “ANASA” Athens, Greece

About 30% of adolescents have to deal with a health problem lasting >3 months. Only 10–15% have serious and chronic health problems. Individuals of 10–19 years of age constitute the one-fifth of Earth's population (1, 2 billions). Four out of five are living in developing countries. The health of adolescents in Europe is not up to satisfactory standards. Despite the progress noted in certain countries, there is still a lot to be done. Adolescent-friendly services is a key tool for prevention and treatment and must be characterized by the following features: Friendly and trained staff, “Drop in”, appropriate working hours, confidentiality, quality services at low cost or free, required visiting time, coordination of referrals. Each country needs to build its own model, based on epidemiological, social and cultural data. In Greece on the contrary with what happens regarding child psychiatric services, which are increased substantially during last 25 years, there is a lack of services for adolescents. Despite the evidence that adolescents constitute the 12% of the population (10% of them are immigrants) and epidemiological data show that face serious problems related to their mental health. 20% of adolescents display a depressive affect, 1–5% suffers from depression, 15% of adolescents mention at least one suicide attempt, adolescent pregnancy (15–19 years 52/1,000), 6% of adolescents are of very low (pathological) weight in relation to their height, sex and age, one out of four are daily smokers, 28.2% of adolescents between 14 and 18 years of age often consume alcohol (at least once-twice per week), 40% of fatal motoring accidents have been associated with alcohol use, an increasing number of adolescents are presented with self harm behaviour and (body piercing and cutting) and 1 out of 100 adolescents is “addicted” to the internet. Adolescent's health, must be an immediate priority for European countries and certainly for Greece.

M5-07-4

Management in child and adolescent psychiatry: how does it look in Balkans?

Pejovic Milovancevic, Milica¹; Ispanovic Radojkovic, Veronika²; Popovic Deusic, Smiljka¹; Anagnostopoulos, Dimitris³; Raleva, Marija⁴; Stancheva, Vaska⁵; Burgic, Marija⁶

¹Institute of Mental Health, School of Medicine, University of Belgrade, Serbia; ²Faculty for Special Education and Rehabilitation, University of Belgrade, Serbia; ³University of Athens, Athens, Greece; ⁴University Clinic of Psychiatry, Skopje, Former Yugoslav Republic of Macedonia, Macedonia; ⁵Faculty of Public Health and Sport South-West University “Neofit Rilski” Blagoevgrad, Bulgaria, Bulgaria; ⁶University of Banja Luka, Bosnia and Herzegovina

Child psychiatry in Balkans is somewhere a separate scientific discipline, but still in some countries in regions widely overlap and depends on adult psychiatry services and organization. Its field of expertise includes performing specific diagnostic procedures, treatment, prevention, rehabilitation, and research in the area of disorders of emotional, social, and cognitive development of children and adolescents. The presentation would analyze the development of child psychiatry in selected countries in Balkans (Serbia, Greece, Bosnia, FYROM, Bulgaria and Romania) organization of the services and the main challenges that selected countries are facing. The increase in number of registered mental disorders in children and adolescents is in connection to the years of stress, or more precisely, to the catastrophic events to which the population had been exposed in the last decade of the twentieth century. Almost all government and NGOs have planned strategies for the development of child psychiatry in the region, with goals to prevent problems of mental health in children and adolescents and to promote their mental health.

M5-07-5

Patient management in different European Countries

Pejovic Milovancevic, Milica¹; Milavic, Gordana²; Lahuis, Bertine³; Anagnostopoulos, Dimitris⁴

¹Institute of Mental Health, Serbia; ²National and Specialist Services, South London and Maudsley NHS Foundation Trust, UK; ³Karakter, Hospital for Child- and Adolescent Psychiatry, The Netherlands; ⁴University of Athens, Greece

The presentation is designed to analyze diagnose, treatment and management of one clinical problem in four different countries. One vignette will be presented and professionals from four different countries will discuss diagnostic and therapeutic procedures in their countries or clinics, with a special emphasis on management. The paper will analyze the differences between systems organization in mental health protections in different part of the Europe. Aim will be to discuss the differences but also to work on overcoming the difference toward better professional collaboration between regions and toward more uniform management in child and adolescent psychiatry.

M5-07-S**Service developments: where we are and where we are heading for**

*Pejovic Milovancevic, Milica*¹; *Milavic, Gordana*²; *Lahuis, Bertine*³; *Anagnostopoulos, Dimitris*⁴

¹Institute of Mental Health, School of Medicine, University of Belgrade, Serbia; ²National and Specialist Services, South London and Maudsley NHS Foundation Trust, UK; ³Director of Karakter, Hospital for Child- and Adolescent Psychiatry, The Netherlands; ⁴University of Athens, Greece

This symposium will cover issues regarding service delivery and management in child and adolescent mental health services. Four speakers from four different countries will present papers based on their own experiences of managing child and adolescent mental health services. Gordana Milavic will present A Child and Adolescent Mental Health Clinical Academic Group: a model of integration across clinical services, research and education. Presentation will focus on the organisation of the CAMHS Clinical Academic Group in the South London and Maudsley NHS Foundation Trust. Bertine Lahuis will present Mental Health Care for Children and Adolescents in the Netherlands: how much do we care for Child-psychiatry in 2020? Presentation will cover issues from the Netherlands where declining financial resources threaten to restrict the growing demand for child mental health care. In order to be able to continue providing the necessary care fundamental changes are required in the health care system, including major paradigm shifts. Dimitris Anagnostopoulos and Eugenia Soumaki will present Mental Health Services for Adolescents in Greece and the need for establishing adolescent-friendly services as a key element for prevention and treatment of mental health problems. Milica Pejovic Milovancevic at all will present Management in child and adolescent psychiatry—how does it look in Balkans? and will analyze the development of child and adolescent mental health in specific countries in the Balkan region (Serbia, Greece, Bosnia, FYROM, Bulgaria and Romania), the organization of the services and the main challenges these countries are facing. At the end of the session the speakers from each country will discuss how a typical case would be managed from the perspective of different mental health systems with an emphasis on resource allocation, service organisation and capacity.

M5-08-1**Effectiveness of indicated prevention of disruptive behaviour problems in children: a multilevel modelling analysis**

*Hanisch, Charlotte*¹; *Plück, Julia*²; *Hautmann, Christopher*²; *Doepfner, Manfred*²

¹University of Applied Sciences Düsseldorf, Germany; ²Department of Child and Adolescent Psychiatry, University of Cologne, Cologne, Germany

Objectives: The efficacy of parent and teacher trainings for prevention or treatment of disruptive behaviour problems in children has been demonstrated in randomized controlled trials. However, only a few studies on the effectiveness of these interventions under routine care conditions were conducted. This presentation reports two studies on the effectiveness of indicated prevention in routine

care in a sample of children at risk for development of disruptive disorders.

Methods: Both studies use a within-subject control group design starting with a baseline-interval with no intervention which was compared to a following interval of either parent training or teacher training according to the German Prevention Program for Externalizing Problem Behaviour (PEP). In the PEP-Teacher study 114 teachers in 90 kindergartens participated. Each teacher focused on one child (3–6 years old) indicated by herself as “at risk for externalising behaviour problems”. In the PEP-Parent study 270 children aged 3–10 years with externalizing behaviour problems were included. Outcome measures included child behaviour problems and parenting/educational behaviour of the teachers. Data were analyzed using multilevel modelling.

Results: In both studies comparison of the changes during the 3-month waiting period and the subsequent treatment periods revealed significantly stronger treatment effects on all outcome measures, indicating a substantial decrease in child behaviour problems and a significant increase in parenting/educational behaviour of the teachers due to treatment.

Conclusion: Effectiveness of both the parent and the teacher training under routine care conditions could be shown. The results complement the randomized controlled studies and show that the results can be generalized to real world settings.

M5-08-2**Effectiveness of parent–child inpatient treatment for families with severe parent–child interaction problems: a multilevel modeling analysis**

Wolff Metternich-Kaizman, Tanja; *Schröder, Sabine*; *Doepfner, Manfred*

Department of Child and Adolescent Psychiatry, University of Cologne, Cologne, Germany

Objectives: Only a few studies assess the effects of inpatient treatment for children with mental disorders. We established a parent–child ward at the University Clinic for Child and Adolescent Psychiatry, Cologne (Germany) for families with severe parent–child interaction problems. The children and one parent are treated at this unit for 4 weeks. The aim of this study is to analyze the effects of this inpatient treatment on child behaviour problems, parenting behaviour and the mental health of the parents.

Methods: N = 68 consecutively treated children aged 3–10 years with severe parent–child interaction problems were included in study. The treatment was based on the German Treatment Program for Children with Hyperactive and Oppositional Problem Behaviour (THOP). Parent focused as well as child focused and parent–child focused interventions were part of this comprehensive treatment package. Pharmacotherapy was conducted as indicated. The effects of the treatment were assessed in a within-subject control group design by comparing a 4-week waiting period with the subsequent inpatient treatment using multilevel modeling analysis. Short term stability and generalization to the natural setting of the family were assessed in a 4-week follow-up.

Results: Two thirds of the children had disruptive disorders (ADHD, ODD). A stronger reduction of disruptive behaviour problems as well as other behavioural and emotional problems as rated by the parents was shown during the treatment compared to waiting period. These effects were maintained and generalized to the natural family setting in a 4-week follow-up. Smaller treatment effects could also be shown in the teacher ratings of child behaviour problems. Moreover,

parenting behaviour and the mental health problems of the parents could be reduced during the treatment.

Conclusions: The study shows that parent-child inpatient treatment for families with severe parent-child interaction problems is an effective treatment option.

M5-08-3

Response heterogeneity in children with disruptive behaviour problems during parent training: a growth mixture modelling analysis

Hautmann, Christopher

Department of Child and Adolescent Psychiatry, University of Cologne, Cologne, Germany

Background and aims: The differential effectiveness of a parent management training (PMT) program for children with externalizing problem behavior was investigated. Subgroups of children with different trajectories of attention problems and conduct problems were analyzed.

Materials and methods: The PMT was tested using a within-subject control group design. 270 families with children aged 3–10 years were included and assessments were made at 3 months before treatment, immediately before treatment, immediately after treatment, and at 12 months follow-up. Data were analyzed using growth mixture modeling.

Results: For attention problems, a two-subgroup solution was obtained. One subgroup started with high initial values indicating more severe impairment, and the other subgroup had low initial values. The more impaired group showed stronger treatment effects. For conduct problems, analyses revealed a three subgroup solution. Two subgroups exhibited high initial levels of conduct problems and the third subgroup had low initial levels. One of the more impaired groups exhibited a strong decrease in problem behavior during treatment, while the other two groups only showed moderate decreases.

Conclusions: Natural trajectory analyses of externalizing behavior often reveal a subgroup of children with chronic high values. Our results suggest that the natural course of development of these children can be changed. For attention problems and conduct problems, some of the most impaired children gained the most from parent training.

M5-08-4

Response heterogeneity in children with ADHD during treatment with modified-release methylphenidate: a growth mixture modeling analysis

Doepfner, Manfred¹; Hautmann, Christopher¹; Rothenberger, Aribert²

¹Department of Child and Adolescent Psychiatry, University of Cologne, Cologne, Germany; ²Department of Child and Adolescent Psychiatry, University of Göttingen, Göttingen, Germany

Introduction: OBSEER was a prospective, observational study examining effectiveness and safety outcomes over 3 months in patients (aged 6–17 years) with attention deficit hyperactivity

disorder (ADHD) receiving once-daily modified-release methylphenidate (Equasym XL) under routine care.

Aims: Clinical practice shows that response to drug treatment differs among children with ADHD. Some patients demonstrate small-to-large improvements during treatment while for others, no substantial symptom reduction can be observed. The aim of this analysis was to investigate this heterogeneity and identify clusters of children with similar treatment response trajectories.

Methods: Changes in ADHD symptoms, as rated by parents and teachers on the German ADHD Symptom Checklist (FBB-ADHD), were examined post-hoc in patients who had measurements at all three study visits (baseline, and 1–3 and 6–12 weeks after first use of Equasym XL), using growth mixture modelling to detect trajectory groups. Model selection was based on a formal statistical criterion (Bayesian information criterion [BIC]) and clinical considerations.

Results: Models with up to 8 classes were computed for parent ($n = 699$) and teacher ($n = 521$) ratings; in both cases, a 6-class model fitted the data best. For both parents and teacher ratings, substantial reductions of ADHD symptoms were observed in four classes, comprising the majority of patients (parents 78.0%; teachers 81.2%). In the other two classes, comprising approximately one-fifth of patients (parents 21.9%; teachers 18.7%), there was no substantial improvement with Equasym XL compared with prior treatment.

Conclusions: Approximately 80% of patients were located to classes with either rapid improvement after onset of treatment with Equasym XL or prolonged improvement after optimizing medication. These results could help to inform practitioners which patients are most likely to benefit from treatment with Equasym XL.

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M5-08-S

Progress in real world interventions for externalizing disorders using innovative designs and data analyses

Doepfner, Manfred¹; Rothenberger, Aribert²

¹Department of Child and Adolescent Psychiatry, University of Cologne, Cologne, Germany; ²Department of Child and Adolescent Psychiatry, University of Göttingen, Göttingen, Germany

Many randomized controlled trials demonstrate the efficacy of either pharmacotherapy or psychotherapy for children with ADHD and other disruptive disorders. However, despite their good experimental control and internal validity the results of these trials do not demonstrate effects of a given treatment in the natural clinical setting under routine care conditions because of the restrictive inclusion and exclusion criteria and due to experimental control such as randomization which limit the generalization to normal clinical populations and settings. This symposium presents clinical trials on the effects of psychotherapy and pharmacotherapy for children with ADHD and other disruptive disorders which were conducted under routine care conditions. Since randomized controlled between subjects designs are not suitable in routine care innovative designs and data analyses are needed. The studies presented in this symposium use within subject control group designs and multilevel modeling analyses as well as growth mixture modeling analyses in order to overcome the limitations of trials conducted in experimental settings.

Presentations:

Hanisch, C., Plücker, J., Hautmann, C. and Döpfner, M.: Effectiveness of indicated prevention of disruptive behaviour problems in preschool children: a multilevel modeling analysis

Wolff Metternich-Kaizman, T., Schröder, S. and Döpfner, M.: Effectiveness of parent-child inpatient treatment for families with parent-child interaction problems: a multilevel modeling analysis

Hautmann, Döpfner: Response heterogeneity in children with disruptive behaviour problems during parent training: a growth mixture modeling analysis

Döpfner, Hautmann and Rothenberger: Response heterogeneity in children with ADHD during treatment with modified-release methylphenidate: a growth mixture modeling analysis.

M5-09-1

Lessons learnt from assessment and long term treatment of children who kill

Bailey, Susan Mary

Greater Manchester West (NHS Trust), FACTS Department, UK

Background: Whist always attracting great interest from policy makers and the public children who kill are still a rare phenomena. Focus is usually on the aetiology of their homicidal act, how such children are dealt with across the diverse criminal justice pathways that exist across all countries in Europe. With often moral debates about the balance of nature v nurture in the trajectory to their homicidal act and curiosity about their outcomes in terms of continued risk to others and quality of life as adults.

Methods: Review of literature on homicidal children will be set alongside the personal experience of assessing and treating 250 such children over 30 years of clinical experience. How ability to treat is influenced by policy constraints, public interest and the legal process.

Outcomes and conclusions: To draw on what can be learnt from working with such children that can be applied across the lifespan from infancy to adulthood to deliver cost effective seamless interventions to children and their families to reduce the risk of acts of serious antisocial behaviour committed by young people. To suggest a framework for multi agency interventions across health, justice education and social care that are achievable, non judgemental, driven by evidence base for treatment and needs and risk assessment.

M5-09-2

Empathy deficits in 6–7 year olds with DBD and ADHD: a computer game based interpersonal response task

Deschamps, Peter¹; Schutter, Dennis²; Kenemans, Leon²; Matthys, Walter³

¹University Medical Centre Utrecht, Psychiatry, The Netherlands;

²Utrecht University, Department of experimental psychology,

The Netherlands; ³Utrecht University Medical Centre, Child and adolescent Psychiatry, The Netherlands

Background: Deficits in empathy have been shown in patients with disruptive behaviour disorder (DBD) and attention deficit/hyperactivity disorder (ADHD). However, systematic studies to examine whether or not impairments in empathy in young children with DBD and ADHD share a common mechanism are lacking.

Aim: To explore empathic deficits in 6–7 year olds with DBD with ADHD compared to ADHD-only and to healthy control children using a computer-based paradigm designed to elicit emotional responses.

Methods: The Interpersonal Response Task (IRT) is a computer ball game assessing the extent to which the child participant will ignore a distressed child in order to obtain monetary rewards. Dependent measures included whether or not the participant allowed the ‘sad’ child to reach maximal distress and throws the ball to a ‘sad’ player as opposed to a ‘happy’ player (i.e., prosocial response). An adapted version of the IRT was used, which allowed the assessment of influence of gender of the distressed child.

Results: Both DBD (n = 30) and ADHD children (n = 21) as compared to healthy controls (n = 40) more often allowed maximal distress (both p-values < 0.001). No difference was found between ADHD and DBD children (p > 0.20). With respect to prosocial response, DBD children ignored the distress in the other child more often than healthy controls or children with ADHD (both p-values > 0.01). No differences were found between ADHD and healthy controls (p > 0.20). No gender effects were found in the interaction between the child participant and the distressed child (p > 0.30).

Conclusion: Our preliminary results suggest reduced empathic responsiveness in young DBD children with ADHD compared to healthy controls demonstrated by ignoring emotional distress of another child in a computer-based ball game. ADHD only children allowed more distress, but responded in a way similar to healthy children that may be suggestive for an attentional problem rather than emotional deficit.

M5-09-4

Oppositional defiant behaviour and empathy difficulties in childhood: interacting risk factors in the development of conduct disorder symptoms

William, Mandy¹; Oliver, Bonamy²; Maughan, Barbara²; David, Skuse³

¹UCL, Research Department of Clinical Psychology, UK; ²Institute of Psychiatry, UK; ³UCL, Institute of Child Health, UK

Background: Theoretical models (e.g. Patterson 1993) and empirical studies suggest that oppositional defiant behaviours (ODB) in childhood are a risk factor for the development of subsequent conduct disorder. Deficits in social cognition, including autistic-like empathy difficulties, are also associated with significant conduct problems. Little is known about how these behavioural and social risk factors interact over time in the development of conduct disorder symptoms.

Objectives: To use a longitudinal cross-lagged panel design to test a developmental model of the emergence of early-onset conduct disorder symptoms (CDS). We predicted that the risk posed by ODBs aged 7 for CDS aged 10 will be magnified by the presence of empathy difficulties. Given its role in the development of conduct problems, we also included hyperactive/impulsive behaviour in our model.

Methods: Data were collected at two time points (child aged 7 and 10 years) by parent report in a large UK community sample (n = 6418). The Social Communication Disorders Checklist was used to measure empathy difficulties and we assessed ODB, CDS and hyperactivity using the Development and Well-Being Questionnaire. Longitudinal data were modelled in Mplus, comparing model fit for high and low empathy groups to test the moderation hypothesis.

Results: ODB at 7 years was a direct risk factor for CD symptoms at 10 years, but only when accompanied by empathy difficulties. By contrast hyperactivity at 7 was a risk for the development of CD symptoms regardless of an individual’s empathy capacities.

Conclusions: Our findings elucidate the developmental psychopathology of early onset conduct problems, identifying an interaction between two child risk factors, ODB and empathy difficulties.

Whereas current interventions for the treatment and prevention of conduct disorder have tended to focus on reducing oppositionality, we suggest that additional efforts to improve social understanding and empathy may also be effective.

M5-09-5 Stress in attachment problems, a body-orientated approach

Niemeijer, Martin; Hoekman, Joop; Kalsbeek, van, Arianne

Zonnehuizen Kinder- en Jeugdpsychiatrie, The Netherlands

Children with developmental disorders in clinical care often show stress-related responses with challenging and aggressive behaviour after minor frustration. There is theory (Ogden 2000; Perry 2006) and some experience in practice that these stress-responses result from attachment problems and react positively on body-orientated therapy. This therapy should result in a decrease of stress and aggressive behaviour and increase of well-being. To investigate how this theory and experience could help in the treatment of children's challenging and aggressive behaviour we made a pilot-study in our psychiatric hospital for children with developmental disorders. In the pilot study 30 children in the intervention group with stress from attachment- and other developmental disorders underwent body-orientated therapy (massage with an etheric oil) 12 times during 6 weeks; a story was told, while afterwards the child was resting in bed. Thirty children in the control group underwent only resting in bed and the story-telling. During and after therapy body temperature, breath frequency and heart rate was measured and heart coherence was calculated. Result of the pilot is that in the intervention group, more than in the control group, the body temperature, pulse/breath quotient and heart coherence normalized during therapy. These results give support to a non confrontational approach which offers safety and support for children during stress-reactions.

M5-10-1 1. The child and adolescent service intensity instrument (CASII)-part I: a dimensional rating system

Janssens, Astrid

Collaborative Antwerp Psychiatric Research Institute, Youth Mental Health, Belgium

The Child and Adolescent Service Intensity Instrument (CASII) is a tool to determine the appropriate level of care placement for a child or adolescent. It can be used for children aged 6–18 years with mental health needs. It was created in response to the many clinicians, administrators, and utilization reviewers who called for the development of a common framework for decision making on the level of care placement, continued stay and outcomes in the treatment of children and adolescents. A clinician gives a dimensional rating of the child and his or her environment on a five-point scale across six dimensions, of which two have two subscales: risk of harm, functional status, co-morbidity, recovery environment (environmental stress and environmental support), resiliency and treatment history, and acceptance and engagement (of the child and parents separately). Each score of a dimension (ranging from 1 to 5) is described by specific criteria or anchor points, which enables the rater to place the child along the spectrum. These ratings sum up to a composite score,

ranging from 7 to 35, and are combined through an algorithm into one of seven levels of care. The CASII is concise, uses information about children generally known by service providers, is easy to understand and score and defines individual needs that translate into an individualized service plan. During this session we will elaborate on the different dimensions of the CASII. In addition, the participants will have the opportunity to score a case on two out of six dimensions.

M5-10-2 2. The Child and Adolescent Service Intensity Instrument-Part II: the levels of care

Janssens, Astrid

Collaborative Antwerp Psychiatric Research Institute Department Youth Mental Health, Youth Mental Health, Belgium

The CASII links a clinical assessment of the child and its environment with standardized levels of care using a detailed algorithm. The levels of care are organized in a unique way. The focus is on the level of resource intensity, which is more flexible defined in order to meet the child or adolescent's needs. Each level of care is defined by a combination of service variables. After scoring the CASII, the recommended level of care can be very useful to develop a service plan. The descriptions may help to locate an appropriate level of overall service intensity. During this session we will elaborate on the different levels of care of the CASII. In addition, the participants will have the opportunity to discuss services from their home country and try to identify the provided level of care or service intensity. This exercise will be continued in the second phase of the role-play.

M5-10-3 3. The wraparound process: a methodology to develop an individualized care plan

Van Dongen, Thirsa

Collaborative Antwerp Psychiatric Research Institute, Youth Mental Health, Belgium

Given the various existing forms of cooperation, Wraparound has been identified as a promising evidence-based practice (Suter and Bruns 2008). The Wraparound approach is a way to integrate and coordinate services within the systems of care framework. Wraparound can be described as a collaborative planning process. It refers to a process of organizing and coordinating service delivery for children and families with complex needs who are involved with several different services, that is, mental health, social services, juvenile courts, schools, psychiatric hospitals, and so on. The Wraparound process includes family members, service providers, and members of the natural and community support networks of the family. These team members work together to create, implement, and monitor a comprehensive, individualized plan of care. The values associated with Wraparound specify that care should be strengths based, culturally competent, and organized around the family members' own perceptions of their needs and goals (Goldman 1999). Since 2008, the Wraparound model (Walker et al. 2004) is implemented in Flanders and used to develop individualized treatment plans for children with complex needs.

M5-10-4**4. Role-play I: Conducting a wraparound process.****Role-play II: Developing a service plan***Van Dongen, Thirsa; Janssens, Astrid*

Collaborative Antwerp Psychiatric Research Institute, Youth Mental Health, Belgium

During a roll play participants get the chance to experience a meeting organised throughout the Wraparound process. The whole group is divided into small groups with seven to eight participants. Every group gets the same case study and each participant gets a role appointed (e.g., parent, youngster, chairperson, practitioner, observer). Before the meeting starts, roles and responsibilities are clarified. The chairperson repeats the ground rules, which promote trust and respect with regard to meeting procedures, confidentiality, and legal considerations. The team members identify the strengths of the child and its family. Next their difficulties and needs are described and prioritized. Finally the goals, associated outcomes and progress indicators are determined. The family members' perspectives are given priority. The participants follow this protocol during the roll play. After listing the strengths and difficulties of the family we assemble and discuss the answers together. The observers give feedback on the results and the dynamics between the team members. In the second part of the roll play the participants get the time to create a service plan, based on the answers assembled in the first part of the meeting. The team members have to keep the Wraparound principles in mind. Potential strategies are open-minded and creatively identified and possible solutions are then evaluated. The action steps are assigned which clearly specify who will do what and when. A case-manager is chosen and the members of the team are identified. The case-manager is responsible for the further succession and for maintaining good communication and coordination between the members of the team. All decisions are recorded and checked for clarity and team approval. Again, each group gives feedback on their service plan to the whole group. At the end, we like to give participants the opportunity to reflect upon the meeting and to discuss the strengths and difficulties of the method.

M5-10-S**Wraparound: an evidence-based participatory planning process***Janssens, Astrid; Van Dongen, Thirsa*

University of Antwerp, Collaborative Antwerp Psychiatric Research Institute, Youth Mental Health, Belgium

It is generally accepted that for particular issues and for certain target groups with cross-cutting needs, service collaboration is necessary to provide a complete package of care tailored to fully meet their needs (Dickinson 2007; Knitzer 1993). Despite policy promoting collaboration and the growing literature of the theoretical advantages of collaboration (Knitzer and Yelton 1990), there is little evidence concerning the effectiveness of joint working practices, especially with regard to the inclusion of impact on outcomes for children and adolescents and their families (Cameron and Lart 2003).

Outline workshop

1. The Child and Adolescent Service Intensity Instrument (CASII)-Part I: The dimensions. Astrid Janssens The CASII is designed to determine the required service intensity of a child or adolescent with

mental health needs: it defines individual needs that translate into an individualized service plan. A clinician gives a dimensional rating of the child and his or her environment across six dimensions. The total score leads to a recommended level of care. 2. Individual task: Scoring a case on two CASII dimensions. 3. The Child and Adolescent Service Intensity Instrument-Part II: The levels of care. Astrid Janssens 4. The Wraparound process: A methodology to develop an individualized care plan. Thirsa Van Dongen Between the different existing forms of cooperation, Wraparound has been identified as a promising evidence-based practice (Suter and Bruns 2008). It is a collaborative planning process that includes family members, service providers, and members of the natural and community support networks of the family (Goldman 1999). Since 2008, the Wraparound model (Walker et al. 2004) is implemented in Flanders and used to develop individualized treatment plans for children with complex needs. 5. Roll play I: Conducting a Wraparound process. 6. Roll play II: Developing a service plan. 7. Evaluation of the Wraparound process: A reflection. Thirsa Van Dongen.

M5-11-1**Promoting scholarship during child psychiatry residency training***Mezzacappa, Enrico*

Children's Hospital Boston, Harvard Medical School, USA

In a report issued in 2003, The Institute of Medicine (USA) identified a critical shortage of psychiatrist-researchers, and highlighted the need for competency-based curricula that promote research training during psychiatry residency as a way to address this shortage. In this presentation, extant approaches to research training during psychiatry residency are reviewed. Five core elements necessary for promoting research training are identified: (1) mentoring, (2) education, (3) experience, (4) time, and (5) support. Six inter-related domains of core research competencies, as well as methods for their gradual attainment over the course of residency training, are described: (1) research literacy, (2) content mastery of specific research topics, (3) principles of research design and methods, (4) principles of biostatistics, (5) presentation and writing skills, including grant writing, and (6) principles of responsible conduct of research. A broadly applicable, developmental, competency-based framework for applying these core elements to research training during psychiatry residency is proposed. Finally, we report on the adaptation, implementation, and results attained thus far using this model in the Child and Adolescent Psychiatry Residency training program at the Children's Hospital Boston, Harvard Medical School, USA. This abstract is part of the proposal "Global perspectives on postgraduate child psychiatry training: challenges, choices and solutions"

M5-11-2**Postgraduate Child Psychiatry Training in Iceland***Guðmundsson, Ólafur*

Department of Child and Adolescent Psychiatry, National University Hospital, Iceland

The University of Iceland has 22 departments of which Psychiatry is the one that includes Child Psychiatry which is a recognized speciality at Landspítali University Hospital. Teaching posts are

professors, associate professors, assistant professors and adjuncts. Preclinical teachers are appointed by the university. Clinical teachers have dual appointments, usually 100% at the hospital and 5–50% at the university. In Psychiatry there are 0.5 professor, 2 associate/assistant professors and 2 adjuncts. Child Psychiatry has one of these adjuncts, all other teaching positions belonging to Adult Psychiatry. The regulations in Iceland to require CAP specialty licence include 4 years of training within the field of Child and Adolescent Psychiatry; one of the years may be designed to research within the field. In addition, 1 year in Adult Psychiatry and half a year in Paediatrics are required. The total minimum number of years in training is therefore 5.5 years. Until now there has been no formal Child Psychiatry training program in Iceland. Young Icelandic doctors like to get their specialty training abroad according to a long tradition. There have been only two doctors who have received their specialty licence in Iceland after fulfilling the required time needed. The UEMS logbook has been used as an aid during their training. Iceland has 320,000 inhabitants. The population of children (under 18 years of age) is about 81,000 (25% of the total population). Active Child Psychiatrists are 8 which equals 1 per 10,000 children. It is worrying for the future of the speciality that most of the currently active psychiatrists are in their 1950s and 1960s with only two doctors in training. Strengthening of the teaching posts is seen as a mandatory step to facilitate interest in our speciality among medical students and junior doctors. This abstract is part of symposium Global perspectives on postgraduate child psychiatry training: challenges, choices and solutions

M5-11-3 **Postgraduate training in child and adolescent psychiatry in the UK and Finland**

Sandhu, Tanveer

Department of Child and Adolescent Psychiatry, Birmingham Children's Hospital, UK

Training in the EU is becoming more homogenized through an ongoing process of review by the European Union of Medical Specialists that evaluates and gives accreditation of equivalence of training to different training programmes in Medical specialties across Europe. However there are still significant variations in the way training programmes are executed in each member state. Training in Child and Adolescent Psychiatry (CAP) is highly structured in the UK. A typical specialist-training programme consists of Core Training of 3 years on a 6 monthly rotation in various sub-specialties of psychiatry such as general Adult, Old age, Forensic, Child And Adolescent psychiatry, Substance Misuse. During these years trainees have to pass three parts Member of Royal College of Psychiatrists to be eligible to apply for Higher Specialist Training in one of the sub-specialties. Higher training consists of 3 years of yearly rotational training in CAP that follows the detailed curriculum and required competencies. Throughout the training rotations all trainees need to be supervised by formally approved trainers on regular basis that includes weekly supervision slots, work based assessments by trainer and multidisciplinary team members, multisource feedback annual appraiser by named external trainer and final Annual Review of Competency Attainment. In Finland CAP is major specialty and training happens in run through fashion for a total period of 6 years, out of which 4 years training is in child psychiatry and 2 years in specified related specialties generally General psychiatry, CAP and Pediatrics. Training is overseen by Professor of child psychiatry but clinical supervision is undertaken by a specialist where trainee is based and

placements are flexible. There is a national exit examination in the final year of training. This abstract is part of the proposal "Global perspectives on postgraduate child psychiatry training: challenges, choices and solutions"

M5-11-4 **Postgraduate Child and Adolescent Psychiatry Training in Singapore**

How, Ong Say

Department of Child and Adolescent Psychiatry, Institute of Mental Health, Finland

Psychiatry training in Singapore has evolved over the years in tandem with changing demands of clinical services and patient expectations. Historically, the psychiatry training in Singapore follows closely to the British medical school system and comprises a 3-year basic specialty training and another 3 years of advanced specialty training. This is followed by sub-specialty training overseas. In 2009, the Ministry of Health and Specialist Accreditation Board recommended that the Institute of Mental Health and other local psychiatric teaching centers adopt the core training guidelines and principles of the US Accreditation Council for Graduate Medical Education—International. With this US-style residency, sponsoring institutions would have a clearer role and vested interest in ensuring that residents under their charge achieve their professional, ethical and personal development. Unlike the US Child Residency program, Singapore has no formal child psychiatry-training program. Child psychiatric trainees would only experience 1 year of child psychiatry attachment as part of their structured learning programme and competency training, and to later pursue their remaining specialized training overseas. With the Residency program commencing in 2010, and running parallel with the existing Basic and Advanced Specialty Training tracks, it remains to be seen as to how our new residency training would evolve over time and how it could take our trainees to newer and greater heights. Focusing on core competences, effective-cum-proactive learning strategies and objective assessment methods to ensure high standards of training, it is with greater likelihood that more residents would consider child psychiatry as a sub-specialty, thus improving the number and quality of child psychiatrists in Singapore. This abstract is part of the proposal "Global perspectives on postgraduate child psychiatry training: challenges, choices and solutions".

M5-11-5 **Postgraduate child and adolescent psychiatry training in The United Arab Emirates**

Amiri, Leena

Department of Psychiatry, UAE University, United Arab Emirates

The United Arab Emirates is relatively a new country established 39 years ago. It is a fast developing country and carries a diverse population. The United Arab Emirates has faced a lot of challenges over the past 39 years since it was established and the healthcare system has been one of them. The psychiatric services has received increasing attention over the past 10 years as the country has expanded its services and started campaigns raising awareness about common adult psychiatric disorders that has not been addressed openly. The Child Adolescent Psychiatry services on the other hand,

has long been neglected with less than a handful of qualified Child and Adolescent Psychiatrist practicing at the present, providing services that covers a country with a population of 8 million and is on the rise. This comes with further challenges as most of these psychiatrists do not speak the native language of Arabic and are not acquainted with the country's religion, culture and tradition. To this date there is no Child and Adolescent Psychiatry training in the United Arab Emirates, there is however a Psychiatry Residency Training that has graduated four Psychiatrist so far. As it stands, there are a total of nine residents in the training program, and on average 2–3 residents are accepted into the program every year. With no Child and Adolescent inpatient unit, and limited resources essential to provide comprehensive treatment and management plan, training residents in child psychiatry rotations as part of the Psychiatry Residency program has been a difficult task to accomplish. Future consideration of developing a Child and Adolescent Training program has been impacted by this limitation; therefore, a lot of improvisation was needed to use current resources to train psychiatrist and residents interested in this field. This abstract is part of the proposal "Global perspectives on postgraduate child psychiatry training: challenges, choices and solutions".

M5-11-6

An effective model for postgraduate training in child psychopharmacology

Gorman, Daniel

Department of Psychiatry, Sick Kids Hospital, University of Toronto, Canada

Background: The University of Toronto (U of T) has North America's largest residency program in Psychiatry, with over 150 residents training across 14 sites. Until 2006, however, General Psychiatry (GP) residents at U of T received limited education in child psychopharmacology, and Child and Adolescent Psychiatry (CAP) residents received no systematic advanced education in this area. Thus, a great need existed to develop an effective model for postgraduate training in child psychopharmacology.

Aims: To develop and deliver a comprehensive child psychopharmacology curriculum for GP and CAP residents at U of T.

Methods: A needs assessment was conducted, and this included informal consultation with residents and faculty as well as a survey administered to residents. In early 2006 a series of seminars on child psychopharmacology was developed, and by mid-2007 they became the Advanced Child Psychopharmacology (ACP) course that GP and CAP residents at U of T are required to attend. The course has been assessed through resident evaluations at each seminar and various informal measures.

Results: The content and format of ACP will be described, highlighting the evolution of the course and how challenges have been addressed. Resident evaluations and informal measures suggest that ACP has been a highly successful educational program. **Conclusion:** ACP is a promising course that potentially could be disseminated from U of T to other Psychiatry residency programs in Canada and worldwide. However, complementing the course with a clinical rotation in child psychopharmacology may help residents consolidate their knowledge, enhance their skills, and develop their attitudes with respect to this complex and controversial area of medicine. Plans to develop and evaluate this kind of clinical rotation will be discussed. This abstract is part of the proposal "Global perspectives on postgraduate child psychiatry training: challenges, choices and solutions".

M5-11-S

Global perspectives on postgraduate child psychiatry training: challenges, choices and solutions

Skokauskas, Norbert

Department of Psychiatry, Trinity College, Dublin, Ireland

Dr. Norbert Skokauskas (Chair), Trinity College Dublin, Ireland Speakers: Dr. Enrico Mezzacappa, Children's Hospital Boston, Harvard Medical School, USA Dr. Ólafur Guðmundsson, National University Hospital, Iceland Dr. Tanveer Sandhu, Birmingham Children's Hospital, UK Dr. Ong Say How, Institute of Mental Health, Singapore Dr. Leena Amiri, UAE University, United Arab Emirates Dr. Daniel Gorman, Sick Kids Hospital, University of Toronto, Canada Overview abstract.

Background and objectives: Teaching and learning about Child and Adolescent Psychiatry (CAP) poses a number of challenges: What learning objectives, what teaching methods, what assessment strategies? This symposium aims to provide a global perspective on postgraduate CAP training by focusing on current challenges, choices and solutions and is sponsored by AACAP (American Academy of Child and Adolescent Psychiatry) Special Interest Study Group on Problem Based Learning in CAP. Teaching Methodologies: In this 120 min symposium, we will use 90 min of 6 (15 min each) interactive lectures, 30 min of feedback, comments, group discussion and questions.

Results: The symposium will produce immediate and long-term results. The participants are expected to leave the symposium not only with a better understanding of progressive teaching techniques in CAP, but also with ideas for future research and collaboration. We hope that it will be a forum for sharing knowledge, experiences and mutual interests. For the participants with a little or no experience in teaching CAP this symposium will be a good learning opportunity too. They will be able to analyse, evaluate and put into action acquired teaching techniques and skills. We ultimately anticipate that the results of this symposium would be the improvement of education programs for future child and adolescent psychiatrists. PS All speakers' abstracts will be submitted separately.

O1-01-PL

After-care principles in the Jokela and Kauhajoki shootings

Palosaari, Eija

Crisis and Trauma Psychotherapist, Finland

The school shootings in Jokela (2007) and Kauhajoki (2008), two exceptional massacres in Finland, demanded a long-term support to the community and individuals. It is understandable, that in these kinds of situations standard local services cannot offer adequate support. The planning of after-care commences immediately and it is interlaced with the crisis help of the acute phase. Knowledge of normal human reactions in crises is very important. After-care is not only about broadening the standard services and offering special ones, but also integrating it is know-how with ordinary working processes. Successful after-care requires e.g.:—Expertise in planning and evaluating the need for services—Specialised leadership in collaboration with the local administrative management—Transparency in economic resources—Clear division of tasks between the location of the accident and the victim's place of residence—Effective transfer of information from the acute phase to the after-care phase—Flexible integration of support within the standard service system—Low-

threshold support and tangible help in finding services (i.e. Social Insurance Institution benefits, therapies)—Psycho-education—Gradually reducing the after-care, and consolidating the information and special skills into the permanent service structures in municipalities. After-care commences in line with the similarities in the victims' experiences and natural groups: for example interventions for the families/friends of the deceased; those who have experienced immediate threat/physical injuries or those who have experienced shocking perceptions by their own senses, classmates, staff etc. Special attention must be paid to supporting the participants to the after-care and the responsible professionals. As the after-care proceeds, both the recovery processes and the forms of support will diverge. As the same time as communal methods focused on the traumatic event shift away, individual trauma therapies increase step by step. The traumatic event is activated i.a. on anniversaries, by the investigation reports and legal actions. Thus, the after-care must react flexibly and use variable working methods. The after-care of the school shootings in Finland is estimated to take 3–4 years.

T2-01-1

To what extent do diverse neuropsychological tasks tap into an underlying IIV-factor and is such a factor useful in ADHD gene finding experiments?

Lambregts-Rommelse, Nanda¹; Wood, Alexis²; Kuntsi, Jonna³; Luman, Marjolein⁴; Oosterlaan, Jaap⁴; Sergeant, Joseph⁴; Buitelaar, Jan⁵; Bralten, Janita⁶; Franke, Barbara⁶

¹University Center Nijmegen, The Netherlands; ²University of Alabama, Epidemiology and Statistical Genetics, USA; ³King's College London, MRC Social, Genetic, and Developmental Psychiatry, UK; ⁴VU University, Clinical Neuropsychology, The Netherlands; ⁵Donders Institute for Brain, Cognition and Behaviour, Cognitive Neuroscience, The Netherlands; ⁶Radboud University medical Center Nijmegen, Antropogenetics, The Netherlands

Attention-deficit/hyperactivity disorder (ADHD) is a strongly (70–75%) genetically determined neuropsychiatric disorder that in most cases (>70%) is accompanied by one or more neuropsychological impairments. Because molecular genetic studies have indicated that in the vast majority of patients, multiple genes of small effect are related to the disorder, interest has grown in using neuropsychological measures to boost gene finding experiments. Despite the fact that this approach to ADHD gene finding looks promising, task-related error variance undermines attempts to combine neuropsychological datasets across sites for increased statistical power in genetic analyses. Therefore, it is of great interest to examine to what extent different tasks tap into the same underlying construct that is possibly less error-prone than task-specific measures and if such a construct can be useful in molecular genetic analyses. Because of the strong association with ADHD on a phenotypic and genetic level and the fact that widely different tasks produce measures of intra-individual variability (IIV), IIV is prime candidate for such an attempt. Findings will be discussed of the Dutch subsample of the International Multi Center ADHD Genetics Project (IMAGE), consisting of 238 ADHD families (350 ADHD-affected children and 195 non-affected children) and 149 control families (271 children). IIV measures are derived from seven neuropsychological tasks that vary greatly with respect to cognitive load, pacing of stimuli, and IIV construct that was used. Results indicate that a unitary IIV construct exist that is common to all tasks that were investigated. This suggest that IIV is a prime candidate to include in diagnostic procedures of

ADHD and may be used for early detection of (precursors of) the disorder and monitor treatment outcomes.

T2-01-2

ADHD and moment-to-moment behavioural variability: a genetic investigation

Kuntsi, Jonna¹; Pinto, Rebecca²; Ilott, Nicholas²; Wood, Alexis³; Asherson, Philip²

¹King's College London, MRC SGDP Centre, Institute of Psychiatry, UK; ²King's College London, UK; ³King's College London; University of Alabama at Birmingham, UK

Introduction: Twin studies indicate that ADHD is highly heritable (70%) and that the genetic risk factors influence levels of ADHD symptoms throughout the population. Our recent analyses on a large sample of ADHD and control sibling pairs suggest that 85% of the familial risk factors on ADHD are shared with those influencing behavioural variability during neuropsychological assessments, as captured in reaction time (RT) variability (Kuntsi et al. 2010). The RT familial cognitive impairment factor separated from a second familial cognitive impairment factor in ADHD. Further, the association between ADHD and high RT variability is not a non-specific effect mediated by lower general cognitive ability (Wood et al. 2011). We now aim to identify genetic risk variants that account for the association between ADHD and RT variability. A better understanding of such potential causal pathways is required for improved assessment and treatment of ADHD.

Methods: 1,156 twins (ages 7–10) were assessed on a four-choice RT task and a go/no-go task. Parents and teachers provided ratings on ADHD symptoms. We examined associations with 12 previously identified ADHD risk genes.

Results: Our strongest result suggests an association between a serotonin receptor 2A gene (HTR2A) polymorphism and both RT variability ($p = 0.003$) and ADHD symptoms ($p = 0.02$). Overall, our pattern of results is consistent with our previous analyses that suggest the existence of two familial pathways to cognitive impairments in ADHD.

Conclusions: Our recent genetic investigations are consistent with two current models that distinguish between two underlying cognitive impairments in ADHD: the arousal-attention model and a developmental model. We are currently investigating the genetic and developmental pathways further within follow-up and genomewide association studies.

References:

1. Kuntsi J et al (2010) Arch Gen Psychiatry
2. Wood AC et al (2011) Psychol Med

T2-01-3

Neural signature of moment-to-moment variability in ADHD: a twin study

McLoughlin, Grainne¹; Palmer, Jason²; Rijdsdijk, Fruhling³; Kuntsi, Jonna³; Asherson, Philip³; Makeig, Scott²

¹King's College London, UK; ²University of California San Diego, Institute of Neural Computation, USA; ³King's College London, Institute of Psychiatry, UK

Introduction and objective: ADHD is strongly associated with reaction time variability (RTV), shown in moment-to-moment inconsistency in responding (Klein et al. 2006; Kuntsi et al. 2010). RTV is heritable and shares genetic/familial influences with ADHD (Wood et al. 2009). One of the most convincing proposals for the cause of increased RTV in ADHD is that it represents lapses in attention due to under-arousal/state regulation difficulties (Sergeant et al. 2005); however, this has never been directly tested. This study proposes to use Independent Component Analysis (ICA) (Delorme and Makeig 2004) to study this question in detail. ICA exploits the temporal resolution of EEG to provide a rich characterisation of neural activity associated with RTV in ADHD, in particular indices of arousal and attention.

Methods: 68 twin pairs were recruited from the Twins Early Development Study. EEG data was recorded during three attentional tasks. Using ICA, fluctuations in neural event-related indices of attention and arousal were identified in the EEG data, and their genetic architecture and relationship with ADHD was examined using structural equation modelling.

Results: We observed that variability of neural indices associated with attention was heritable (57–70%). Intra-individual variability (IIV) in neural activity shares a large genetic overlap with RTV (95%). Further, IIV in brain indices of attention share genetic overlap with ADHD (27–50%).

Discussion: The large genetic overlap between RTV and IIV in brain indices of attention suggests there are shared genes contributing to IIV at the cortical and behavioural level in ADHD. Overlap with ADHD indicates ICA-derived brain measures may be promising endophenotypes.

Conclusion: ICA provides a useful means of measuring genetically significant neural factors in ADHD. These findings will aid in the characterisation of intra-individual variability in ADHD and potentially provide a basis for non-pharmacological treatments.

T2-01-4

Electro-cortical correlates of intra-subject variability in attention-deficit hyperactivity disorder

Klein, Christoph¹; Feige, Bernd²

¹University of Freiburg; Bangor University, Germany; ²University of Freiburg, Germany

Increased intra-subject variability (ISV) of manual reaction times figures prominently in the literature on attention-deficit hyperactivity disorder (ADHD) as one of the most robust and replicable correlates of ADHD symptoms. This study addresses two questions that are of fundamental importance to our understanding of this phenomenon and, potentially, ADHD. First, what is the nature of increased ISV in ADHD? To address this question, we derived a differentiated set of RT parameters from our tasks which reflect different facets of ISV (e.g. moment-to-moment fluctuations, periodicities etc). Second, what is the neural basis of increased ISV in ADHD? This question was addressed by relating single-trial RTs with single-trial event-related potentials (ERP). Twenty-three healthy adults (aged 20–25 years), 25 healthy children (aged 11–12 years) and 26 patients with ADHD (aged 11–12 years) took four visual choice reaction time tasks of the 0-back and 1-back type and using jittered (2.0–3.0 s) versus constant (2.0 s) inter-trial intervals (2×180 trials, 25% targets each). The EEG was recorded from 64 channels using active electrodes and DC amplifiers (sampling rate 500 Hz, DC-250 Hz; Brain Products, Munich). Independent Components Analysis (ICA) was employed for artifact correction and single-trial ERP analysis, distinguishing

between early/perceptual, medium-latency/cognitive and late/motor components. Results suggest greatest behavioral differences between patients and controls in various, inter-related measures of ISV and significant correlations between amplitude or latency of single-trial cognitive ERP and single-trial RT. Results will be discussed in the broader context of the neural bases of ADHD and their implications for the treatment of the disorder.

T2-01-5

Novel experimental and data analysis approaches for assessing intra-individual variability

Palva, J. Matias; Palva, Satu

University of Helsinki, Neuroscience Center, Finland

Normal human cognitive performance is highly variable at all time scales even under constant experimental conditions and even in responses to simple stimuli (Palva and Palva 2011; Monto et al. 2008). This variability is temporally structured so that psychophysical performance in any given trial is similar to the performance in preceding trials (Verplanck et al. 1952). Specifically, human perceptual or cognitive performance in a wide range of tasks is autocorrelated in a scale-free, aperiodic fashion and governed by scaling laws (Monto et al. 2008; Gildea 2001). ADHD is characterized by abnormally large fluctuations in behavioral performance, as seen in high reaction-time variability. It has, however, remained unclear whether the scaling laws of behavioral dynamics are abnormal in ADHD. We postulate that the exploration of these scaling laws could shed light on systems-level neuronal malfunctioning in ADHD because they may directly and quantitatively relate to the dynamic state of the underlying spontaneous brain activity (Palva and Palva 2011; Monto et al. 2008). Hence, behavioral scaling laws could both reflect an overall brain-state construct and act a useful biomarker in the quantification of intra-individual variability (IIV). In this presentation, we present an experimental paradigm (Monto et al. 2008) that may be optimally suited for exploring the ménage à trois of scaling laws, IIV, and brain dynamics (Palva and Palva 2011). We show that in healthy controls, this paradigm yields (i) behavioral dynamics that directly reflect cortical dynamics in magneto- and electroencephalography with minimal task-execution related bias, (ii) behavioral scaling laws with excellent power-law fits, and (iii) high individual test-retest reliability. This validation thus opens new possibilities for studies of IIV in ADHD.

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T2-01-6

ADHD and moment-to-moment behavioural variability: a behavioral investigation

Sagvolden, Terje¹; Johansen, Espen Borgå²

¹University of Oslo, Norway; ²Akershus University College, Norway

Introduction: Attention-deficit/hyperactivity disorder (ADHD) is characterized inattention, hyperactivity and impulsiveness. ADHD-affected individuals also have high intra-individual variability (IIV) in behavior e.g. (Aase et al. 2006; Aase and Sagvolden 2006). The Spontaneously Hypertensive Rat (SHR/NCrI) is an animal model of ADHD, expressing high activity, inattention and impulsive behavior (3). The SHR might be useful for identifying genes for variability, but it is not known whether it also expresses high IIV, as is symptomatic of ADHD. We therefore conducted investigation of IIV in the SHR.

Results: SHR/NCrI rats had higher IIV than controls for activity, impulsiveness, and attention.

Discussion: The results suggest that the SHR may be useful in elucidating the genetic basis for IIV in humans. The dynamic developmental theory of ADHD (4, 5) suggests that deficient reinforcement of successful behavior, combined with deficient extinction (elimination) of unsuccessful behavior will slow the association ('chunking') of simple response units into longer, more elaborate chains of adaptive behavioral elements that function as higher-order behavioral units (1, 2, 6–9). Whenever behavioral units are chunked together into a chain of responses that is emitted in this context, each behavioral unit reliably precedes the next with high predictability. Consequently, deficient or slowed chunking of behavior will increase intra-individual variability. This is observed in children with ADHD and in the SHR (1, 2, 8, 9).

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T2-01-S

What underlies the highly variable performance in attention deficit hyperactivity disorder? A focus on brain processes and genetic risk factors

Dr. Klein, Christoph¹; Rommelse, Nanda²; Kuntsi, Jonna³; McLoughlin, Grainne³; Klein, Christoph⁴; Palva, Matias⁵; Sagvolden, Terje⁶

¹University of Freiburg, Department of Child and Adolescent Psychiatry, Germany; ²Vrije Universiteit Amsterdam, The Netherlands; ³Kings College London, UK; ⁴University of Freiburg, Germany; ⁵University of Helsinki, Finland; ⁶University of Oslo, Norway

A frequent observation by both clinicians and researchers is the high moment-to-moment, intra-individual variability (IIV) in behavioural performance in children and adolescents with attention deficit hyperactivity disorder (ADHD). In neuropsychological studies this is observed in high reaction time (RT) variability across tasks, which is one of the best cognitive discriminators between ADHD and control groups. The association between ADHD and high behavioural variability is now robustly established; yet the investigation of the processes underlying intra-individual variability and their implications for the management of ADHD is only beginning. This workshop will address three topic areas that are crucial for the understanding of IIV as a window to the aetiology of ADHD and its potential implications for the management of the disorder: genetic basis, neural correlates and data-driven theoretical models. During the first part of the workshop, Drs Rommelse and Kuntsi will present large-sample

behaviour genetic data from ADHD and control sibling pairs to show that IIV is a unitary construct that shares a large proportion of familial variance with ADHD, and will present new data from investigations of the molecular genetic underpinnings of increased RT variability. During the second part, Drs McLoughlin and Klein will present electroencephalogram (EEG) data that used Independent Component Analysis (ICA) of multi-channel EEG recordings in samples of ADHD participants and twin pairs to identify the neural basis of RT variability. The third part will focus on concepts (Dr Palva) and models (Professor Sagvolden) of IIV in ADHD that help conceptualising both the structure of IIV and its implications for ADHD as a dynamic developmental disorder. Taken together, the workshop will emphasise the potential of measures of IIV as a biological-genetic marker of ADHD and in understanding the causal pathways, and will discuss the implications for intervention.

T2-02-1

Predicting posttraumatic stress disorder in child and adolescent victims of road traffic accidents

Charitaki, Stella¹; Giannakopoulos, George¹; Liakopoulou, Magda¹; Pervanidou, Panagiota²; Chrousos, George²; Kolaitis, Gerasimos¹; Tsiantis, John¹

¹University of Athens Medical School, Department of Child Psychiatry, Greece; ²University of Athens Medical School, 1st Department of Pediatrics, Greece

Aims: To examine the role of psychosocial and biological parameters in the prediction of pediatric posttraumatic stress disorder (PTSD) following road traffic accidents.

Methods: Fifty-eight hospitalized children and adolescents aged 7–18 years were assessed immediately after a road traffic accident (RTA) and 1 and 6 months later. Self-completed questionnaires and semi-structured diagnostic interviews were used in all three assessments. Neuroendocrine evaluation was performed in the initial assessment.

Results: Among all factors examined, only mothers' PTSD symptomatology could predict the development of children's PTSD 1 month following the RTA, while the persistence of PTSD 6 months later was independently predicted by increased salivary cortisol concentrations (ig/dl) within 24 h after the RTA.

Conclusion: Thorough assessment of both biological and psychosocial risk factors for later development and persistence of PTSD may be crucial for the provision of early prevention and treatment interventions.

T2-02-2

Posttraumatic stress, depression and anxiety in children and adolescents following a massive fire disaster: prevalence and related factors

Giannakopoulos, George¹; Ntre, Vasiliki²; Moulla, Vasiliki²; Tzavara, Chara²; Tomaras, Vlasios²; Kolaitis, Gerasimos²

¹University of Athens Medical School, Greece; ²University of Athens Medical School, Department of Child Psychiatry, Greece

Aims: To assess the prevalence of symptoms of posttraumatic stress disorder (PTSD), depression and anxiety in children and adolescents

exposed to a massive fire disaster in Greece along with the relationships of these symptoms with disaster-related stressors and sociodemographic characteristics 4 months after the fire.

Methods: A sample of 343 youths aged 9–18 years from schools in an area severely affected by the fire completed self-reported questionnaires. The Children's Post-Traumatic Stress Disorder-Reaction Index-Revised (CPTSD-RI-R), the Children's Depression Inventory (CDI) and the Screen for Child Anxiety Related Emotional Disorders (SCARED) were used to assess relative symptoms, while fire-related stressors were also examined in participants.

Results: The estimated prevalence rates of high levels of PTSD, depressive and anxiety symptoms 4 months post-disaster were approximately 45, 34 and 32%, respectively. Staying without both parents after the fire was strongly associated with more PTSD symptoms, while housing adversity and loss of property were most strongly associated with elevated depressive symptoms. Life-threatening experience of a loved one and worry for a loved one predicted higher levels of PTSD symptomatology, whereas injury of a loved one was associated with high levels of depressive and anxiety symptoms.

Conclusions: The above mentioned findings highlight the importance of preventive and treatment mental health services in the aftermath of natural disasters.

T2-02-3

Posttraumatic stress disorder in child and adolescent psychiatric inpatients

Kotzia, Thekli; Belivanaki, Maria; Tsiantis, John; Kolaitis, Gerasimos

University of Athens Medical School, Department of Child Psychiatry, Greece

Aims: To identify posttraumatic stress symptomatology among child and adolescent psychiatric inpatients.

Methods: Fifty-six child and adolescent psychiatric inpatients were investigated in depth over a three year period through. Detailed history, the semi-structured psychiatric interview for children and adolescents Kiddie-Schedule for Affective Disorders and Schizophrenia-Present and Lifetime version (K-SADS-PL), the Children's Global Assessment Scale (C-GAS), and the Children's Depression Inventory (CDI) were used.

Results: A high rate (75%) of the hospitalized children and adolescents had been exposed to violent events, either in their family or/and in the community. Nineteen percent of the inpatients had developed posttraumatic stress disorder (PTSD). Exposure to violence and PTSD were more common among girls than boys. Common among those with PTSD symptomatology was sexual abuse (82%), while from the cases with sexual abuse 89% exhibited PTSD. In all these cases, the sexual abuse was recurrent, usually intra-familial (89%) and violent (90%). High rates of co-morbidity were observed among those with PTSD; the main comorbid disorders found were mood disorders (3/4 of all cases). In 73% of PTSD cases and in 48.4% of those exposed to traumatic events, suicidal attempts were reported, while at the same time the percentage of the inpatients with attempted suicides as a result of other psychiatric disorders was 19%.

Conclusions: Child and adolescent psychiatric inpatients with severe psychosocial problems and/or suicidal behaviour should be thoroughly assessed for possible exposure to traumatic events and the development of PTSD so as to benefit from appropriate specific approaches and psychosocial interventions.

T2-02-4

Posttraumatic stress disorder in children and adolescents exposed to different traumatic situations: a review of recent studies

Kolaitis, Gerasimos

University of Athens Medical School, Department of Child Psychiatry, Greece

Children may be faced with different traumatic situations and events in their lives such as natural disasters, accidents or abuse (physical, sexual, other). These traumatic experiences are often associated with the development of Posttraumatic Stress Disorder (PTSD) but also depression, anxiety and other symptoms. Epidemiology, aetiology, clinical symptoms and treatment outcome studies involving children with PTSD following exposure to traumatic accidents, natural disasters and family/community violence/abuse are reviewed. This review highlights the importance of the early identification of PTSD symptoms, and the importance of a thorough and accurate assessment of trauma by gathering information from parents and children, for the implementation of appropriate interventions in a multimodal approach. A recent review by Cohen and Mannarino (2010) of five established child trauma treatments for PTSD, i.e. child-parent psychotherapy, cognitive behavioral interventions for trauma in schools, cognitive behavioral therapy for PTSD, structured psychotherapy for adolescents responding to chronic stress, and trauma-focused cognitive behavioral therapy documents that these treatments are effective in treating multiple problems beyond the current PTSD diagnostic criteria. The assessment and treatment of comorbid disorders is of great importance by using psychosocial but also pharmacological interventions when needed. The importance of conducting early screening of trauma-exposed children is also discussed.

T2-02-5

Traumatic loss and natural disasters: family resilience approach to help children and adolescents after the earthquake in l'Aquila

Corsini, Tiziana¹; Campetti, Fabio²; Pavia, Rosalia³; Guarino, Giuseppe⁴

¹Regional Dept. Of Civil Protection Basilicata., Mental Health Service, Italy; ²Dept. Civil Protection Basilicata., Italy; ³Dept. Civil Protection Basilicata, Italy; ⁴Regional Dept. Of Civil Protection Basilicata, Italy

Background: The earthquake which hit the Abruzzo region in central Italy (6.3 Richter scale magn) left 66,000 people homeless, while 1,500 were wounded and 308 died. In this area, 170 camps composed by tents were set up to host victims. In every camp many psychologists realized psychosocial interventions to help people cope with trauma.

Aim: The study describes the family resilience-oriented approach to recovery children and adolescence from traumatic loss.

Materials and methods: Sixty patients (29 adolescents; 31 children; mean age 9.38 ± SD 5.63) were administrated the "Psychological Triage Tool" to detect traumatic symptoms and individual or familial losses 1 month after the earthquake. Their families were provided with family resilience-oriented therapy sessions to enhance coping strategies, communication and mutual support.

Results: In the first evaluation patients evidenced different kind of losses: sense of physical or psychological wholeness (24%); significant persons and relationships (33%); head of family or community leader (8%); intact family unit, homes, or communities (42%); way of life and daily habits (27%), that decreased with the therapy.

Conclusions: Working with family resilience promoted parental skills and sense of trust for the future. Children and adolescents found reassurance as daily routines or new arrangements were put in place. Collaboration between families and social networks was essential. With the loss of basic structures, families had to reorganize, recalibrate, and reallocate roles and functions. Clear rules and guidelines were established to structure children's context to make them feel that they could count on parents for support, comfort and safety.

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T2-02-6

Mental health community program for children and adolescents after L'Aquila earthquake

*Corsini, Tiziana*¹; *Campetti, Fabio*²; *Pavia, Rosalia*³; *Guarino, Giuseppe*⁴

¹Regional Civil Protection Group Basilicata, Italy; ²Regional Dept. Of Civil Protection Basilicata, Mental Health Service, Italy; ³Regional Dept. Of Civil Protection Basilicata., Italy; ⁴Regional Dept. Of Civil Protection Basilicata, Italy

Background: On 6th April 2009, the city of L'Aquila was hit by an earthquake of 6.3 Richter scale. The disaster left 66,000 people homeless. The National Dept. of Civil Protection hosted victims in 170 camps composed by tents. Every camp was provided with a mental health service for the first aid, the mid-term and the long-term psychosocial support. Psychosocial intervention to prevent traumatic symptoms in children and adolescents focused on: (1) promoting school attendance inside the camp; (2) recreative therapy; (3) parental psychoeducational and psychosocial support.

Aim: The study describes a mental health community program for children realized in a camp who hosted 500 people, whose 60 were aged 1–18 years (29 adolescents; 31 children; mean age 9.38 ± SD 5.63).

Materials and methods: Psychological Triage Checklist was administrated to detect mental health issues during the first week after the earthquake.

Results: Adolescents reported mild (45%) and severe traumatic symptoms (23%). Children showed mild (49%) and severe traumatic symptoms (16%). Psychological assessment 2 months after psychosocial intervention showed a prevalence of mild traumatic symptoms in children (32%) and adolescents (38%), while in both of samples severe symptoms seemed to be constant (20 and 12%).

Conclusions: Psychosocial support for children, adolescents and their parents can reduce post traumatic symptoms, even though pre-disaster psychological functioning must be considered.

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T2-02-S

Post-traumatic stress symptoms in children and adolescents exposed to different traumatic situations: results from three Greek studies

Kolaitis, Gerasimos

University of Athens Medical School, Department of Child Psychiatry, Greece

Objective: The purpose of this symposium is to present findings from three Greek studies of children and adolescents exposed to different traumatic situations (road traffic accidents, massive fires, physical/sexual abuse).

Methods: The session will include (1) a brief review of the recent literature on Post-Traumatic Stress Disorder (PTSD) in young people, (2) a presentation on Predicting Posttraumatic Stress Disorder in Child and Adolescent Victims of Road Traffic Accidents, (3) a presentation on Posttraumatic Stress, Depression and Anxiety in Children and Adolescents Following a Massive Fire Disaster: Prevalence and Related Factors, and (4) a presentation on Posttraumatic Stress Disorder in Child and Adolescent Psychiatric Inpatients.

Results: Each speaker will discuss the implications and highlight the relevance of the findings to clinical practice.

Conclusions: These three studies provide important information to guide systematic evaluation and therapeutic management of children and adolescents exposed to different traumatic situations.

T2-03-1

Follow-up of long-term child psychiatric residential care

Wielemaker, Jolanda; Verheij, Fop; Verhulst, Frank

Erasmus Medical Center-Sophia Children's Hospital, Child and Adolescent Psychiatry, The Netherlands

Residential care focuses on children, including their families, who suffer from severe psychiatric problems which disturb their development. The aim of the inpatient treatment is to stimulate their development, correct or repair as well as possible. The few available outcome studies indicated that although many children improved, some do not, and for 40% their psychiatric disorders continued in adulthood. The objective of this study was to investigate a range of psychiatric and psychosocial outcomes in young adults who had been child psychiatric inpatients of the Erasmus MC-Sophia Children's Hospital in the Netherlands. Half of them were diagnosed with an autism spectrum disorder; others had various psychiatric disorders due to a background of child maltreatment. An average of 15 years had elapsed since discharge for the 96 respondents who participated in this study, a response rate of 81%. Half of them were adequately functioning in adulthood and had no emotional or behavioural problems. Others were functioning well in school or work but had more psychological complaints compared to the general population. Others

continued to suffer from psychopathology or were functioning socially less well compared to the general population or an outpatient treated group. More emotional-behavioural problems and lower GAF-scores were found in adulthood for inpatients who were diagnosed with an autism spectrum disorder during child psychiatric treatment compared to inpatients treated for psychiatric disorders due to child maltreatment. Respondents with a low intelligence and who were of a young age at the start of the child psychiatric treatment had an unfavourable adult outcome more often as well. Although some problems continued, it was considered positive that half of the long-term treated inpatients were doing well in adulthood. However, more follow-up data from other residential treatment centers are necessary to compare the outcomes of this severely disturbed group.

T2-03-2

Development and evaluation of the individual proactive aggression management method for residential child psychiatry and child care

Valenkamp, Marije; Verheij, Fop; Van de Ende, Jan; Verhulst, Frank

Erasmus Medical Center-Sophia Children's Hospital, Child and Adolescent Psychiatry, The Netherlands

Because aggression is one of the most important reasons for referral to youth mental health services, aggressive behavior and escalations in residential child psychiatry are common phenomena. Restrictive interventions, such as seclusion and restraint, can be useful with respect to the safety of the child or others but are used more often than needed (Singh et al., 1999) and can be traumatic both for children and group workers. Erasmus Medical Center—Sophia Children's Hospital has developed a proactive aggression management method for residential child psychiatry with the aim of decreasing the frequency of aggressive behaviors and incidents in which restrictive interventions are used. The Pro-ACT (Proactive monitoring of Aggression in Children Tool), a new monitoring system for child settings, based on both the SOAS-R (Nijman et al., 1999) and the REFA (Bjorkly, 1996), and an Individual Aggression Management plan are the core elements of the method. The present paper discusses the Individual Proactive Aggression management method, its theoretical framework and the results of a multi-site study with pre- and post-test carried out in the Netherlands. A substantial decrease was found in the frequency of the use of restrictive interventions. Overall, no significant difference was found between levels of aggressive behavior problems before and after implementation. Aggression levels of children with higher reactive aggressive problems, however, decreased to a greater extent than the aggression levels of children with lower reactive aggressive problems. Overall, group workers are positive about the intervention. The frequency of restrictive interventions declined after implementing the Individual Proactive Aggression management method. Therefore, working with this newly developed intervention is recommended.

T2-03-3

The clinical course of inpatient treated children in a Child Psychiatric Unit in the Netherlands

Hofstra, Marijke; Flos, Manuelle; Van Sloten, Nienke; Wielemaker, Jolanda; Verheij, Fop; Verhulst, Frank

Erasmus Medical Center-Sophia Children's Hospital, Child and Adolescent Psychiatry, The Netherlands

Inpatient treatment focuses on children, including their families, who suffer from severe psychiatric problems that disturb their development. For this severely disturbed group outpatient treatment has shown to be insufficient. The inpatient treatment aims to stimulate the overall development, to correct or repair as well as possible. The data collection of this research is ongoing, and the first descriptive data will be shown. We will describe the psychiatric treatment of the Erasmus MC-Sophia Children's Hospital, Department of Child and Adolescent Psychiatry and how children develop and the level of psychopathology changes during their inpatient treatment. Standardized measures on admission, after 6, 12 and 18 months and at discharge, include multiple perspectives such as parent's report of family functioning, family life events, child psychopathology, quality of life, parental mental health and clinicians ratings of impairment, and strengths and associated variables which can predict eventual positive or negative adaptation within the community. We also aim to evaluate change in psychopathology and in family factors and which factors are associated with this change. In this presentation the inpatient treatment of children with (in general) severe psychiatric problems will be described as well as the clinical course of these children and their families during treatment.

T2-03-S

Residential care for children aged 4–12 years: clinical course, long-term outcome and impact of proactive aggression management

Valenkamp, Marije; Wielemaker, Jolanda; Hofstra, Marijke; Verhulst, Frank

Erasmus Medical Center-Sophia Children's Hospital, Child and Adolescent Psychiatry, The Netherlands

We present the clinical course of inpatient treatment of children aged 4–12 years with severe psychiatric problems. Measures of psychopathology and development from multiple perspectives on admission, after 6, 12 and 18 months and at discharge will be shown. We also present the long-term outcome of children who have been treated the past 25 years in our child psychiatric unit. The main question is how this group functions in society many years after discharge. An important aspect of our inpatient treatment is aggression management, because aggressive behavior of children in residential care is common and contributory for the development and outcome of these children on the short and long-term. The results of a multi-site trial of the Proactive Aggression Management intervention, carried out in the Netherlands, will be presented. The intervention aims to decrease aggressive behavior and the use of restrictive measures, such as seclusion and restraint, in residential care.

T2-04-S

Future of child and adolescent psychiatry

Tamminen, Tuula¹; Omigbodun, Olayinka²; Keren, Miri³; Anagnostopoulos, Dimitris⁴

¹University of Tampere, Finland; ²University of Ibadan, Nigeria; ³University of Tel Aviv, Israel; ⁴University of Athens, Greece

This workshop will bring together the leading persons from the international societies in the field for a joint discussion concerning present and future of child and adolescent psychiatry. The chair of the

workshop is the President of the European Society for Child and Adolescent Psychiatry (ESCAP), Professor Tuula Tamminen from Tampere, Finland. The International Association for Child and Adolescent Psychiatry and Allied Professionals (IACAPAP) will be represented by its President, Associate Professor of Psychiatry Olayinka Omigbodun from Nigeria. Dr Miri Keren from Israel will, as the President-Elect, represent the World Association for Infant Mental Health (WAIMH) and Assistant Professor Dimitris Anagnostopoulos from Athens represents as the Chair the World Psychiatric Association's Child and Adolescent Section (WPA CAP section).

The participants will present their personal view on how they foresee the future for child and adolescent psychiatry. What kind of opportunities, possibilities and challenges they think there will be for all working in the field both as clinicians and researchers. During the general discussion also the audience is invited to raise questions and concerns.

T2-05-1

Diagnostic and intervention in regulation disorders by DC: 0-3R-data from an outpatient unit for infant psychiatry in St. Gallen, Switzerland

Bindernagel, Daniel; Mögel, Maria

Kinder- und Jugendpsychiatrische Dienste St. Gallen, Switzerland

The care-pathways of an outpatient Unit for Infant Psychiatry in Switzerland are presented. Between 2004 and 2010, 220 cases (N = 220) were assessed and treated following DC: 0–3 and DC: 0–3R. Diagnoses, number of consultations and the process of treatment are demonstrated. The most frequent diagnoses amongst our patients are regulation disorders. We observe high levels of interdependence between symptoms of the child and parental dysfunctions. Parental burden reduces the capacity to perceive a child's needs and also profoundly modulates the interaction with consequences for self-regulation and later cognitive and emotional development. Vice versa, an accentuated infantile irritability impacts the social interaction between parents and child, possibly leading to impairment of parental competence. Both circumstances result in well recognized symptoms of high motor discharge with restrictions in cognitive organisation and particular difficulties in complex social situations, like contact with coeval peers. We differentiate the perspectives of the child, the parent-child-relationship, the parenting process as well as the larger family environment. The following questions are of clinical relevance: 1. how can parents be sustained and facilitated as regulatory support for their restless child and 2. how can the pressure on the parent-child-relationship be reduced. Finally, we propose suggestions for clinical and developmental orientated outcome research in infancy and early childhood.

T2-05-2

Diagnostic and intervention in regulation disorders by DC: 0-3R-Case 1: infantile regulation problems as an expression of parental dysfunction

Bindernagel, Daniel

Kinder- und Jugendpsychiatrische Dienste St. Gallen, Switzerland

A 2.5 year old boy shows symptoms of an impulsive regulation disorder (430). He has a strong need for motor discharge and shows diffuse impulsivity and aggressive and reckless behaviour. We

differentiate the perspectives of the child, the parent-child-relationship, the parenting process as well as the larger family environment. In this case-study we give detailed demonstration of assessment and intervention by video. We see the main pathology in the parenting process as well as in the larger family environment and some pathology on the level of the child. Looking closer to psychodynamics of the child we observe difficulties in the affect regulation driven by fear about what is going on with the parents. Therefore the therapeutic intervention addresses mainly the issues of parenting and family processes. We see reduction of symptoms within 3–5 month. The parents can be facilitated as regulatory support for their restless child and the parent-child-relationship can be unburdened.

T2-05-3

Maternal stress and infant social-emotional wellbeing

Haapsamo, Helena¹; Carter, Alice²; Soini, Hannu³; Ebeling, Hanna⁴; Joskitt, Leena⁴; Moilanen, Irma⁵

¹University of Oulu, Child Psychiatry, Finland; ²University of Massachusetts, Psychology, USA; ³University of Oulu, Education and Teacher Education, Finland; ⁴University Hospital of Oulu, Childpsychiatry, Finland; ⁵University and University Hospital of Oulu, Childpsychiatry, Finland

Background: Infant wellbeing and development is in part dependent on parental care and different situations of life have its effects to this dyad.

Aims: To examine relations between maternal stress in infancy and toddler social-emotional and behavioural development from fifty mothers of infants (16 boys and 34 girls), who participated in this study. Mothers' educational levels varied from students to professionals and households' educational level varied from lower secondary level to tertiary levels which are typical educational levels at Oulu region.

Methods: Mothers rated their own parenting stress with the Parenting Stress Index-Short Form (PSI, Abidin, 1999) when their infants were 8 months of age and rated their toddlers' development at 18 months of age with the Brief Infant and Toddler Social Emotional Assessment (Briggs-Gowan and Carter 2006), the MacArthur Communicative Development Inventories (MCDI, Fenson et al. 1994) and the Childrens' Behavioural Checklist (CBCL, Achenbach 2001).

Results: Maternal stress in the parenting role and in the parenting-child-interaction were correlated with social-emotional and behaviour problems.

Conclusions: Mothers reporting stress in the first year of life experience their infants as having greater social-emotional and behaviour problems. Future work is needed to address relations between early maternal stress and parenting practices and observed toddler behaviour.

T2-05-4

The model of child psychiatric assessment of small children (0-3 years) in the Baby Team of the Child Psychiatry Unit in Turku University Hospital

Manninen, Hanna; Kallioinen, Outi; Renfors, Tuula; Saranpää, Päivi

Turku University Hospital, Child psychiatry unit, Finland

The Baby Team has developed a clinical working model of assessing babies and their families. **Assessment procedure:** 1. family

consultation, 2. network meeting with parents and other professionals working with the family if needed, 3. the assessment procedure: family investigation session, WMCI-interviews of both parents, video based assessment of the interaction between the child and both parents separately and in triadic situation, Bailey-III-test of the child (video taped). Concerning twins, assessment is done separately and together with both babies. Neuropsychiatric, neurologic or other consultations are asked if needed. 4. the team discussion: the material is worked through and suggestion for the treatment plan formulated, 5. the feedback session for the parents, 6. the second network meeting if needed.

Aims: 1. to get information about whole family: communication, emotional relationships, ways of solving problems, the dynamic of parent's relationship, information about family's and parents' life history, 2. to observe the early interaction between the baby and the parents or also between babies (if twins), 3. to get to know the behavioural pattern and temperament of the baby and his/her developmental progression and skills, 4. to get to know the parents' mental representations of themselves and each others as parents and the baby, 5. and finally to find the most important gate(s) for treatment to start.

Conclusion: Clinically, this model works well in many respects: it helps to create a confidential relationship between parents and workers, it helps to find the main point of maybe many problems and makes it possible to handle it with parents and in co-operation with them to find the best way to start supporting, treatment or rehabilitation. It also works already as a first phase of treatment. After this the treatment is easily carried out in the baby team or the family can be guided to other services.

T2-05-5

Psychotherapy groups to enhance mental health and early dyadic interaction among drug abusing mothers

Belt, Ritva¹; Flykt, Marjo²; Punamäki, Raija-Leena²; Pajulo, Marjukka³; Posa, Tiina⁴; Tamminen, Tuula⁵

¹University of Tampere, Child Psychiatry, Finland; ²University of Tampere, Department of Psychology, Finland; ³University of Turku, Department of Child Psychiatry, Finland; ⁴Terveystalo, Lahti, Finland; ⁵University of Tampere, Department of Child Psychiatry, Finland

The purpose of this study was to examine the effectiveness of two outpatient interventions for drug abusing perinatal mother-infant dyads. Psychodynamic mother-infant group psychotherapy (PGT) comprised 20–24 weekly 3-h sessions and follow-up, and individually designed psychosocial support (PSS) lasted an average of 12 months. We hypothesized positive change would occur in maternal drug use, mental health and dyadic interaction, especially in PGT due to its therapeutic focus and peer support. Participants were 26 drug abusing dyads in PGT and 25 in PSS, and 50 non-abusers. Assessments were pre-intervention, 4 and 12 months. Both interventions were effective in decreasing maternal drug abuse and depressiveness and improving the quality of mother-child interaction. Maternal hostility significantly decreased only in PGT, and intrusiveness decreased in both intervention groups, but especially in the PTG group. Results are encouraging, because hostility and intrusiveness are core problems in mother-child relationship among substance abusers and have been found to increase children's developmental risks.

T2-06-1

Aggregation and divergence of ASD-related phenotypes in unaffected siblings of ASD

Cho, In Hee

Ghil Hospital, Gacheon University of Medicine and Science, Republic of Korea

Objectives: The purpose of this study is to evaluate the possible clinical and subclinical symptoms in unaffected siblings of children and adolescents diagnosed with ASD in behavioral and cognitive realms.

Methods: Subjects with ASD, their unaffected siblings (SIB) and typically developing children (TC) are recruited. All subjects were assessed with Korean version of ADI-R and ADOS and administrated by Executive Functions tests batteries. Behavioral characteristics measured by Social Responsiveness Scale, Asperger Syndrome Diagnostic Scale, Aberrant Behavior Scale and Child Behavior Checklists are compared in three groups.

Results: The ASD showed significantly higher scores in all measures as compared with the other two groups ($p = 0.00$), there are no differences between SIB and TC ($p > 0.05$). When we limited the verbally fluent subjects who are administrated K-ADOS module 3and4 (ADS = 56, SIB = 86, TC = 48), we observed significantly higher scores in algorithmic Reciprocal Social Interaction domain score of ADOS in SIB as compared with TC ($p < .05$). The difference between SIB and TC are highlighted in *Insights, Empathy/Comments on Others Emotion, Facial expression toward others and reports events* of ADOS. ($p = 0.00$). In Executive Functions Batteries, there was no difference in Commission Error, Reaction Time and Reaction Time Variability in Continuous Performance Test between ASD and SIB groups ($p > .05$). There were no significant differences in other behavioral measures between SIB and TC groups.

Conclusion: The difference of subclinical autistic symptoms between siblings of ASD and typically developing children is most significant in Reciprocal Social Interaction domain. Unaffected siblings of ASD showed problem in attention although they did not clinical criteria of attention deficit disorder. These data suggest that subclinical symptoms related reciprocal social interaction and attention problems might be aggregated traits in families with ASD.

T2-06-2

New directions of behavioral phenotyping of autism spectrum disorder

Chung, Un Sun

Gyeongbook National University, Republic of Korea

Objectives: Identifying phenotypes expressed by unaffected family members might help enhancing analytic power in genetic study of complex traits as ASD, but exploration of diverse phenotype in ASD is still limited. The objective of this presentation is to raise issues in more relevant characterization of phenotypes in ASD.

Methods: We tried to explore relatively new are of behavioral and cognitive characteristics in probands and families of ASD. First, we performed preliminary analysis for pragmatic elements of language of 20 patients with ASD, 20 unaffected siblings (SIB), and typically developing children (TC) using *Creating Story Task* of ADOS module 4. Second, we analyzed factor structure of Korean version of ADI-R of 258 subjects with ASD (male = 232, female = 52, age

105.49 ± 28.10 months) using Varimax rotation and Eigen value ≥ 1 criteria to extract Korean-specific behavioral subdomains of the instrument.

Results: (1) In pragmatics analysis of Narrative Disclosure, probands with ASD showed lower level of Story Grammar, Story Structuralization and Story Ending. SIB group showed lower level of Internal Plan in Story Grammar and less frequent highest degree score in Story Structuralization compared to TC. (2) In the principal component analysis of ADI-R, total 11 factors are extracted from *past* items and might be provisionally characterized by dividing *Elementary level of Social Development* and *Play and Higher Social Interaction* subdomains in Social Reciprocity Domain.

Conclusion: Pragmatic skills and principal component analysis of pre-existing diagnostic tools might be plausible trait in ASD. Statistical methods to extract the potential behavioral traits from multiple inter-related measurements will be discussed in this session. Exploration of new phenotypes admitting language and cross-cultural issues will be needed in the future research.

T2-06-3

Genome-wide association study (GWAS), quantitative trait analyses and population structure

Yoo, Hee Jeong

Bundang Seoul National University Hospital, Republic of Korea

Objectives: The objective of this presentation is to discuss genome-wide association study (GWAS) results and following quantitative trait analysis for evaluating relations between new candidate genes derived from GWAS and traits from phenotype analyses. It also includes the analysis of population stratification status of our subjects and discussion about uniqueness and diversity of Korean population.

Methods: We performed GWAS for 143 patients with ASD (79.9 ± 35.6 months, 22 females) in Korean population and 828 healthy, sex-matched adult controls with same ethnicity. All subjects were genotyped using the Affymetrix 5.0 SNP array and we applied stringent quality control criteria, including call rates, minor allele frequencies, heterozygosity, relationship errors, Mendelian inheritance error, and Hardy-Weinberg Equilibrium, and cluster quality control. We performed the second-phase family-based candidate gene analysis using TDT and quantitative trait analysis using QFAM test for significant alleles and behavioral domains of ADOS, ADI-R, and rating scales measuring behaviors of ASD.

Results: After correction of multiple testing with false discovery rate, 5 SNPs in 4 genes (2 SNPs of FHIT gene, 1 SNP of STX8, COL23A1, and SLA6A2 each) revealed significant association ($p \leq 3.47 \times 10^{-6}$, adjusted $p < .05$). The second-phase analysis for 243 family trios (729 individuals) revealed that 2 SNPs of FHIT gene (rs812965, rs780375, $p < .05$) and one SNP of SLC6A2 (rs41153, $p = 0.00$) revealed significant association. In quantitative trait analysis, rs41152 and rs2270935 in SLC6A2 gene revealed significant association with *Sensori-motor Domain of Asperger Syndrome Diagnostic Scale* and *Quantitative Abnormalities in Communication/Lack of Socioemotional Reciprocity* of ADI-R ($p < .05$).

Conclusion: These results from two-phase genetic association study suggest that FHIT and SLC6A2 might be involved in pathogenesis of ASD, especially in specific behavioral domains.

T2-06-4

Cross the border: future direction and suggestion of behavioral genetic studies

Cho, Soo Churl¹; Yoo, Hee Jeong²

¹Seoul National University Hospital, Republic of Korea; ²Seoul National University Bundang Hospital, Republic of Korea

Objectives and methods: The objectives of this presentation is summarize overall symposium and suggest future directions for more integrative behavioral genetic studies, focused on the uniqueness and commonness of our approach with other ethnic and cultural groups based on the data presented in previous three subjects. It will also address the need of the establishment of collaborative groups and shared resources as an important steps for identification of candidate genes addressing population diversity in different ethnic groups. It will cover methodological issues regarding development and exploration of more culture and language-independent phenotypes such as physical measures, longitudinal developmental trajectories of ASD including developmental regression and stagnation, and visuospatial functions. It will also raise issues of the possibility of biological subtyping of ASD based on phenotype-genotype relationships and consideration of cross-cultural issues in behavioral genetic study of ASD.

T2-06-S

Genetics and phenotypes of autism spectrum disorder: diversity and commonness in Korean population

Yoo, Hee Jeong¹; Cho, In Hee²; Chung, Un Sun³; Cho, Soo Churl⁴

¹Seoul National University Bundang Hospital, Republic of Korea; ²Ghil Hospital Gacheon University of Medicine and Science, Republic of Korea; ³Gyeongbuk National University, Republic of Korea; ⁴Seoul National University, Republic of Korea

The objective of this symposium is to present the results of behavioral genetic study of autism spectrum disorder (ASD) performed in Korea and to discuss it in the genotype-phenotype relationship and population genetics perspectives. In the project, 176 families (720 individuals) consist of probands, siblings and both biological parents and another set of 151 family trios are recruited, carefully phenotyped and assessed using Korean versions of ADOS, ADI-R, intelligence, language, and adaptive functions tests, executive functions tests and rating scales measuring behaviors associated with ASD. Genotyping and statistical analyses were done. This symposium is composed of 4 presentations. (1) **Aggregation and divergence of ASD-related phenotypes in unaffected siblings of ASD:** It describes behavioral and cognitive profiles of unaffected siblings empathizing possible familial aggregation of those characteristics. (2) **New directions of behavioral phenotyping of ASD:** It is to raise methodological issues in characterization of phenotypes, including results of principal component analysis of pre-existing diagnostic tools, exploration of new phenotypes admitting language and cultural issues, and statistical methods to extract the potential behavioral traits from multiple inter-related measurements. (3) **Genome-wide association study (GWAS), quantitative trait analyses and population structure:** It is focused on GWAS results and following quantitative trait analysis

for evaluating relations between new candidate genes derived from GWAS and traits from phenotype analyses. It also includes the analysis of population stratification status of our subjects and discussion about uniqueness and diversity of Korean population, which raises issues regarding population genetics in different ethnic groups. **(4) Future direction:** It is suggestion for more integrative behavioral genetic studies, focused on the uniqueness and commonness of our approach with other ethnic and cultural groups.

T2-07-1

Teenage-onset anorexia nervosa 18 years later: Psychiatric and somatic health

Wentz, Elisabet

University of Gothenburg, Sweden

Purpose: To study prospectively the long-term outcome regarding psychiatric and somatic health in a representative sample of teenage-onset anorexia nervosa (AN).

Method: 51 AN cases, recruited by community screening, were contrasted with 51 matched comparison individuals (COMP) at a mean age of 32 years (18 years after AN onset). All individuals had been examined at ages 16, 21 and 24 years. They were interviewed regarding psychiatric disorders, overall outcome, somatic problems, pregnancies, and offspring status. A physical examination was performed.

Result: There were no deaths at 18-year follow-up. Twelve percent ($n = 6$) had a persisting eating disorder (ED), including three with AN. 39% of the AN group met the criteria for at least one psychiatric disorder. The general outcome, according to Morgan-Russell, was poor in 12%, intermediate in 10% and good in 78%. One in four did not have paid employment due to psychiatric problems. The AN group weighed less than the COMP group. In contrast to the COMP group who gained weight the AN group exhibited no change in weight or BMI over the eight-year period. The frequency of somatic problems did not differ across the two groups. Dental enamel lesions and shorter than expected stature were two somatic problems only occurring among individuals in the AN group. Dysdiadochokinesis was more common in the AN group and age of AN onset was lower among those who exhibited the neurological deficit. 27 women in the AN group and 31 women in the COMP group had children. Mean age at birth of the first child was lower in the AN group. Children in the AN group had significantly lower birth weight than the children in the control group.

Conclusion: The eighteen-year outcome of teenage-onset AN is predominantly favourable in respect of mortality, persisting ED, somatic problems and reproduction. Even though most individuals have recovered from their ED, weight and related parameters reveal a persistent restricted eating behaviour.

T2-07-2

Teen-age onset anorexia nervosa 18 years later: social and cognitive functioning

Rastam, Maria¹; Anckarsäter, Henrik²; Billstedt, Eva²; Gillberg, Carina³; Gillberg, Christopher⁴; Hofvander, Björn²; Wentz, Elisabet⁵

¹Lund University, Sweden; ²Lund University, Sweden; ³University Upsala, Sweden; ⁴University of Gothenburg, Sweden; ⁵University of Gothenburg, Sweden

Aim: This 18-year community-based follow-up of teenage-onset anorexia nervosa (AN) examines neurocognition and social cognition longitudinally, including a stepwise regression to establish predictors of outcome.

Method: 51 individuals with teenage-onset AN and their 51 matched comparison cases were examined at four studies at mean age 16, 21, 24, and 32 years using e.g. SCID-I and II, Morgan-Russell outcome scale, the GAF, the Asperger Syndrome Diagnostic Interview, self-assessments by the Autism-Spectrum Quotient and the Temperament and Character Inventory. Childhood personality traits including autistic traits obtained in the first study from a structured parent interview were assigned on the basis of de-identified case notes on premorbid history by a senior psychiatrist who was blinded to group status. At the three follow-up studies they were tested with WAIS and tests pertaining to problems in mentalizing and executive functioning.

Result: The AN group had significantly more problems with social cognition and obsessiveness in childhood according to their mothers persisting in many cases after recovery. 6 subjects in the AN group had autistic traits in childhood and had been assigned an autism spectrum condition at every examination. 16 AN individuals had been assigned a diagnosis of an autism spectrum disorder at one or more occasions by a blinded rater and were seen as having autistic traits. The AN group had more executive function and mentalizing problems than their matched comparison cases. In a subgroup with autistic traits those problems were significantly worse. Low age of AN onset, premorbid OCPD, and autism spectrum disorders (ASD) in childhood predicted a poor outcome according to the global functioning scales. **Conclusions:** Some autistic features in AN may be a cognitive style, not deficit. A subgroup of subjects with AN meets criteria for ASD. They may represent the extreme of neurocognitive and personality problems to be found more generally in AN.

T2-07-3

Cortical thickness and structural brain alterations in adolescents with anorexia nervosa before and after weight recovery

Seitz, Jochen¹; Vorhold, Verena²; Bitar, Raoul²; Konrad, Kerstin²; Herpertz-Dahlmann, Beate²

¹University of Gothenburg, Child and Adolescent Psychiatry, Germany; ²University Hospital Aachen, Germany

Purpose of the study: Structural brain imaging studies have provided evidence for a reduced cerebral volume in adolescents with anorexia nervosa (AN). However, there are conflicting results whether loss of gray matter (GM) volumes and increase in ventricular cerebrospinal fluid volumes is persistent or completely reversible after weight recovery and what are the neurobiological mechanisms behind structural brain alterations.

Methods: Nineteen patients with AN aged between 12 and 18 years were investigated with MRI twice, at time of admission to hospital (T1) and after weight recovery (T2, on average 15 weeks after T1). $N = 19$ healthy controls were also scanned twice. Cortical thickness analysis (CTA) and voxel-based morphometry (VBM) was applied.

Results: Patients showed reduced GM volumes at T1, in particular in fronto-parietal brain regions compared to controls. These GM reductions were partly rehabilitated after weight recovery at T2. Increase in total GM volumes at T2 was positively associated with an increase in BMI in AN patients. Weight recovery was accompanied by an increase in follicle stimulating hormone (FSH) in AN patients from T1 to T2. A significant association between differences in

circulating FSH levels and an increase of hippocampal and amygdala GM volumes between T1 and T2 was identified in the patient group. **Conclusions:** Our data suggest that brain alterations observed in adolescents with acute AN are partly reversible after short-term weight recovery, and that rehabilitation of structural brain development is closely associated with weight recovery and hormonal changes.

T2-07-4

Association between learning and memory, leptin and hippocampal volume during weight rehabilitation in adolescent anorexia nervosa patients

Buehren, Katharina¹; Vorhold, Verena²; Herpertz-Dahlmann, Beate²; Konrad, Kerstin²

¹University Hospital Aachen, Child and Adolescent Psychiatry, Germany; ²University Hospital Aachen, Germany

Background: During acute starvation in eating disorders there a various hormonal, neuropsychological and morphological changes. To date, it is still not clear whether these abnormalities are completely reversible after weight rehabilitation. In literature, associations between leptin, learning and memory functions and hippocampal volume are discussed.

Methods: In 14 female adolescents with a DSM IV diagnosis of anorexia nervosa (AN), we assessed leptin and leptin receptor levels in serum after an overnight fast as well learning and memory functions at admission to hospital (T1) and after weight rehabilitation (T2). At the same time points, we performed a structural MRT to measure changes of hippocampal volume. We compared the results with those of an age-matched control group.

Results: The hippocampal volume rose significantly from T1 to T2. However, the hippocampal volume was still slightly reduced in comparison to control subjects. Leptin receptor levels significantly correlated with memory performance at admission and the increase of leptin levels between T1 and T2 was significantly associated with an increase of hippocampal volume at T2.

Conclusions: The association between hormonal, neuropsychological and structural results is discussed and possible clinical implications are presented.

T2-07-S

Adolescent anorexia nervosa (AN)—findings from long-term studies and neurobehavioral research

Herpertz-Dahlmann, Beate¹; Wentz, Elisaber²; Rastam, Maria³; Seitz, Jochen⁴; Bühren, Katharina¹

¹University Hospital Aachen, Child and Adolescent Psychiatry, Germany; ²University of Gothenburg, Child and Adolescent Psychiatry, Sweden; ³Lund University, Child and Adolescent Psychiatry, Sweden; ⁴University Hospital Aachen, Child and Adolescent Psychiatry, Germany

The symposium will comprise two important aspects: (1) the outcome of adolescent AN and (2) new findings in neuroimaging investigations including a cortical thickness analysis on the association between neurohormonal and structural findings in adolescent patients. In the first presentation Elisabeth Wentz, who

is one of the famous authors of the Goteborg outcome study in AN, will demonstrate the results of an 18-year-follow up study of a community sample of adolescent AN referring to psychiatric outcome and somatic health in early adulthood. This will also include findings on fertility and reproduction. In the second presentation, Maria Rastam, will describe social and cognitive functioning in the former AN patients. She will also refer to autistic traits characterizing at least some of the probands of the Swedish sample. In the third presentation Jochen Seitz from Aachen, Germany will present a novel surface-based method to examine cortical changes in adolescent AN patients during weight rehabilitation. Global changes in cortical thickness occurred rapidly and were tightly linked to changes in body mass index as were hormonal and behavioural measures. In the fourth presentation by Katharina Bühren structural MRT study was performed to measure changes of hippocampal volume after weight gain in adolescent AN in relationship to changes of leptin and the leptin receptor. Interestingly the increase of leptin levels was significantly associated with the increase of the hippocampal volume at the end of treatment. Findings in chronically ill and recovered AN patients and neurobiological findings will be discussed in relationship to each other as well as consequences for clinical practise.

T2-08-1

Parental divorce and depression in adulthood: a 26-year follow-up study

Aro, Hillevi; Kiviruusu, Olli; Huurre, Taina; Mustonen, Ulla; Marttunen, Mauri

National Institute for Health and Welfare, Finland

Aims: To examine the impact of parental divorce before age 16 on subsequent depression in adulthood (at ages 22, 32 and 42 years) in a 26-year longitudinal study.

Methods: Subjects (935 females and 864 males) participated at the age of 16 in a cohort study targeting at all ninth-grade pupils attending secondary school in 1983 in Tampere, Finland. They were followed up using postal questionnaires at ages 22, 32 and 42. Parental divorce was reported by the adolescent. Depression was measured with the short 13-item Beck Depression Inventory (S-BDI), and a cut-off point of 5 or more in S-BDI scores was used for depression. Episodic depression (in only one of the follow-up points) and persistent depression (in at least two follow-up points) were compared to the group of no depression in multinomial logistic regression analysis.

Results: Among females parental divorce associated with depression at all follow-up points: at 22 years 17.3% of those with parental divorce were depressed while 11.6% of those from intact families ($p = .032$), at 32 years the figures were 23.6 versus 14.5% ($p = .004$) and at 42 years 24.1 versus 16.6% ($p = .029$), respectively. Among females parental divorce was related to persistent depression (OR = 2.00, 95% CI 1.13–3.52) but not to episodic depression (OR = 1.46, 95% CI 0.90–2.37). Among males parental divorce associated with depression at 22 years (14.6% vs. 7.6%, $p = .009$) but not later (at age 32 years 12.9 vs. 12.6%, $p = .920$ and at 42 years 11.1 vs. 12.8%, $p = .621$). Further, among males parental divorce did not associate with either persistent (OR = 0.83, 95% CI 0.31–2.27) or episodic depression (OR = 1.95, 95% CI 0.99–3.84), although with the latter the association approached statistical significance.

Conclusions: Among both males and females parental divorce had an impact on depression in young adulthood. Among females the impact

was more prolonged and persisted throughout the follow-up till mid-adulthood.

T2-08-2

Non-suicidal self-cutting-what is it?

Laukkanen, Eila

Kuopio University Hospital and University of Eastern Finland, Department of Adolescent Psychiatry, Finland

Background: Self-harm, including self-cutting has become more prevalent in recent years among adolescents. In Finland the life-time prevalence of self-cutting has been reported to be 11.5% and other self-harm 10.2%. Adolescents who have self-cutting or harm themselves have wide-range of problems, but the specific characteristics of both phenomena need further investigation.

Aims: To investigate factors associated with self-cutting according to the place of injury (visible vs. hidden place).

Methods: The total sample included 4019 Finnish 13- to 18-year-old adolescents (46% boys). The study sample was 439 (boys, $n = 43$) adolescents who answered “yes” on the question “Have you ever cut yourself?”. The structured questionnaire included questions about background factors, social relationships, smoking, alcohol and substance abuse and the Youth Self Report, Beck Depression Inventory, Toronto Alexitymia Scale and the Adolescent Dissociative Experience Scale. Chi squared test and Fisher’s exact test were used in first phase analysis and when comparing the scores of the psychiatric scales of those with self-cutting in the upper arm or elsewhere ANCOVA adjusted for age and gender.

Results: Self-cutting on other parts than arms (arms, $n = 295$, boys 35 vs. other parts, $n = 144$, 7 boys) was more common among females and associated with poor performance in mathematics and sniffing. In more detailed analysis were found strong associations with numerous symptoms, especially internalising problems including anxious and depressive symptoms and thought problems and dissociative symptoms.

Conclusions: Girls, who have made hidden wounds represent the most serious group of self-cutting adolescents, should be referred to psychiatric evaluation and treatment. When an adolescent, who have wounds or scars on his/her arms, contacts health care personnel, it is important to do a careful physical examination of her/his whole body.

T2-08-3

Course and outcome of adolescent depression in eight-year follow-up

Karlsson, Linnea; Martin, Tanja; Kiviruusu, Olli; Marttunen, Mauri; ADS, Study Group

National Institute for Health and Welfare, Mental Health and Alcohol Research, Finland

Background: Longitudinal data on adolescent depression outcomes in young adulthood is scarce. These kind of data are needed to increase understanding on early-onset mood disorders and to further develop interventions.

Method: Adolescent Depression Study (ADS) is a naturalistic clinical follow-up study in which 218 consecutive depressed adolescent psychiatric outpatients (13–19 years, 85% females) and 200 age- and sex-matched school based controls have been comprehensively assessed at

baseline, one- and eight-year time points. Any mood disorder, including bipolar depression, was included in this study.

Results: In 1-year follow-up, approximately half of the adolescent outpatients continued to suffer from depression. Longer time to recovery was predicted by earlier lifetime age at onset for depression, poor psychosocial functioning, and longer episode duration by study entry. Psychiatric comorbidity was not a significant predictor of recurrence or recovery with the exception Axis II diagnosis predicting shorter time to recurrence. At eight-year follow-up, similar clinical predictors will be assessed. Descriptive analyses on course characteristics (illness and episode duration, age of onset, number of episodes) and outcome measures (recovery and recurrence rates) will be presented covering the 8-year follow-up period.

Conclusions: Adolescent depression presents as long-lasting and impairing illness and interventions should possibly be targeted on early signs of depression.

T2-08-4

Treatment characteristics and outcome of depression among depressed adolescent outpatients with and without comorbid Axis II disorders

Strandholm, Thea; Karlsson, Linnea; Kiviruusu, Olli; Pelkonen, Mirjami; Marttunen, Mauri

National Institute for Health and Welfare, Finland

Treatment response in depression among patients with and without Axis II comorbidity has been a discussed topic in psychiatric literature with several studies showing poor treatment response or recovery rates of depression in cases of comorbid Axis II pathology for adults (e.g. Newton-Howes et al., 2006). Few studies have focused on investigating the impact of Axis II comorbidity on the outcome of adolescent depression and treatment characteristics related to the outcome (Narud et al., 2005).

Aim: The aim is to present the one-year outcome and treatment characteristics of depressed adolescent outpatients with and without co-morbid Axis II disorders.

Methods: Participants were 151 consecutive adolescent psychiatric outpatients with depressive disorders interviewed for DSM-IV Axis I and Axis II diagnoses.

Results: The naturalistic treatment outcome for adolescents with comorbid Axis II disorders was poorer than for those without. The treatment received was not related to decrease in the depression symptom levels in the Axis II group as it was for the non Axis II group. The treatment that was given did not differ between the two groups in length, intensity or hospitalization.

Discussion: Personality traits of adolescents should be recognized in treatment settings and special attention should be paid to problematic personality traits when planning and conducting treatment of adolescent depression.

T2-08-5

Involvement in bullying and suicidal ideation in middle adolescence

Kaltiala-Heino, Riittakerttu¹; Heikkilä, Hanna-Kaisa²; Fröjd, Sari²; Marttunen, Mauri³

¹University of Tampere, Medical School, Finland; ²University of Tampere, Finland; ³National Institute for Health and Welfare, Finland

Background: Cross-sectional studies have shown an association between involvement in bullying and suicidal ideation.

Aims: To study the association between involvement in bullying and suicidality in a prospective study design.

Methods: 2070 adolescents responded to Mental Health in Adolescence Cohort Study, survey on mental health and disorders and risk and protective factors, at ages 15 and 17. Involvement in bullying either as victim, bully or bully-victim on monthly basis was recorded. Suicidal ideation was elicited by one item of the BDI. Cross-tabulation with chi-square statistics and logistic regression analyses were performed. Age, sex, family structure and parental education were controlled for, as was depression at baseline.

Results: Being a victim and being a bully at age 15 increased the risk for suicidal ideation at age 17 almost threefold, when depression at baseline was controlled for. The risk among bully victims was 5.5-fold.

Conclusion: The previously suggested association between involvement in bullying and suicidal ideation is confirmed in prospective study design. Bullies and victims bear an equal risk. The risk is highest among bully-victims whom literature has also pictured as generally more disturbed.

T2-08-S

Depression and suicidal behavior in adolescence

Marttunen, Mauri; Karlsson, Linnea

National Institute for Health and Welfare, Finland

Hillevi Aro, MD presents results on the effect of parental divorce before age 16 on offspring's subsequent depression and suicidal ideation in young adulthood and early middle age in a 26-year longitudinal cohort study. The study participants are all ninth-grade students attending secondary school in 1983 in Tampere, Finland. Eila Laukkanen, MD, presents results from a study of over 4 000 Finnish 13- to 18-year-old general population adolescents from Kuopio, Finland. The presentation deals with factors associated with self-cutting according to the place of injury. The talk by Linnea Karlsson, MD, consists of data on the outcome of adolescent depression in 8-year follow-up from the Adolescent Depression Study. The study is a naturalistic clinical follow-up study of 218 13–19-year-old psychiatric outpatients and 200 age- and sex- matched controls comprehensively assessed at baseline, 1, and 8 year follow-up. Descriptive analyses on course (illness duration, age of onset, number of episodes) and outcome (recovery and recurrence rates) will be presented covering the 8-year follow-up period. Thea Strandholm, MA, also presents results from the Adolescent Depression Study. Her talk consists of data on one-year outcome and treatment characteristics of 151 consecutive adolescent psychiatric outpatients with depressive disorders interviewed for DSM-IV Axis I and Axis II diagnoses. Treatment and one-year outcome of depressed adolescent outpatients with and without comorbid personality traits and personality disorders will be reported. Riittakerttu Kaltiala-Heino, MD, presents results of an analysis of the Adolescent Mental Health Cohort Study, a follow-up survey among Finnish adolescents starting from 15 year olds in two cities. The adolescents were surveyed about depression, suicidal ideation and involvement in bullying. Results on the impact of involvement in bullying at age 15 either as a bully or as a victim on suicidal ideation two years later will be presented.

T2-09-1

Improving mental health practice and services for refugee children

Vostanis, Panos

University of Leicester, Child and Adolescent Psychiatry, UK

In recent years, there has been a substantial and steady increase of refugees and asylum-seekers in Western countries, including children with their parents, and unaccompanied minors. Evidence will be presented on the emerging high levels of mental health needs of refugee children, and on the risk factors involved from both their post-traumatic experiences and their adjustment to a new society. Implications for clinical practice and child mental health services will also be discussed. In particular, aspects of mental health assessment such as: referral, engagement, legal, language, cross-cultural, and diagnostic issues. Consideration of interventions with children, parents and wide systems (such as foster carers and schools), will also be based on research evidence and case material. The presentation will be concluded with recommendations on influencing policy, and formulating care pathways and service models for this vulnerable group of children and young people.

T2-09-2

Influences of maternal depression on early child development—a global perspective

Rahman, Atif

University of Liverpool, Institute of Psychology, Health and Society, UK

The influence of maternal stress and depression on the developing foetus and child is a subject of renewed attention because of the high prevalence of depression in women of child-bearing age and its myriad of effects on the child. There is very little research undertaken so far in this field in less developed countries of Asia and Africa. Dr Rahman and his group have explored the impact of maternal depression on the physical development of infants in Pakistan, Malawi and the UK. In his presentation the author will share the results of these studies and discuss the implications and future directions of this research. He will also share his experiences of developing and testing low-cost psychosocial interventions for depressed women in impoverished communities. The presentation will aim at improving evidence based knowledge of the participants on the subject of mental health in cultural context. This will also highlight the unique relationship of mental and physical health in context of global drive for the agenda of “No Health without Mental Health”.

T2-09-3

Prospects of Cultural Psychiatry in Child and Adolescent Mental Health Services

Sourander, Andre

University of Turku, Child Psychiatry, Finland

this will be a discussion session on the current state and future prospects of cultural psychiatry in Europe. The author as discussant

will attempt to present an overview on current developments and potential challenges in incorporating concepts of cross-cultural psychiatry within existing child and mental health services in Europe. This will follow on with an interactive discussion with the audience.

T2-09-4 **Mental health of indigenous children and adolescents in the Arctic**

Lehti, Venla

University of Turku, Child Psychiatry, Finland

There are around 650,000 indigenous people living in the Arctic region which includes large areas in Northern Europe, North America and Russia. Through the ages the Arctic has been a subject to various socio-cultural changes and the indigenous people have experienced injustice and oppression in different forms. Currently there are also several new social, political and environmental challenges. It is possible that the continuous sociocultural transition has an influence on indigenous people's wellbeing. Indigenous children and adolescents currently living in the Arctic may be particularly vulnerable. It can be hypothesised that collective traumas common among previous generations, the lack of cultural continuity, emerging generational gaps and fast modernization are related to problems in ethnic identification and mental wellbeing. Surprisingly little, however, is known about the mental health of young indigenous people. It is known that the youth suicide rates are alarmingly high in certain parts of the Arctic and substance use is generally common. Other psychosocial problems particularly among young children remain largely unexplored. There is a need for large longitudinal and comparative studies, which overcome the methodological limitations related especially to the validity of research instruments in different cultural contexts.

T2-09-S **Cross cultural issues in child and adolescent mental health and development**

Sandhu, Tanveer¹; Sourander, Andre²; Vostanis, Panos³; Rahman, Atif⁴; Lehti, Venla²

¹Birmingham Children's Hospital, Child and Adolescent Psychiatry, UK; ²University of Turku, Child Psychiatry, Finland; ³University of Leicester, Child and Adolescent Psychiatry, UK; ⁴University of Liverpool, UK

Background: In last few decades due to globalization and migration, cross cultural issues have become increasingly relevant in Health and Mental Health services. Child and Adolescent Mental Health Services (CAMHS) are not only dealing with presenting problems of children but also family systems with their inherited core beliefs. These difficulties or the pattern of presentation may be related to cultural and religious values of the society they belong to. Integration to the new country with different socio-cultural norms can give rise to conflict of identities either at trans-generational level within a family or in relation to external systems of the host society. All of these risk factors can impact significantly on the health, development and mental health of these families and turn into a public health issue in terms of social ramifications and burden on society. More research evidence is required to understand the special needs of this

population. One approach could be to undertake research on migrant or minority population in the countries they are settled in. The other way is to conduct studies in the countries with higher rate of emigration of population with distinct socio-cultural norms. This symposium will attempt to examine the subject by using the both above mentioned approaches.

Teaching and methodology: In this 120 min symposium, we will use 90 min of three 30 min each lectures, 30 min of interactive group discussion and questions.

Results: The participants of the symposium will have improved knowledge of the subject through the evidence base updates by the speakers. In the concluding discussions panel members will endeavour to build a shared understanding with the audience as to how health authorities and modern mental health services for children and families in Europe should skill up to meet the challenge of providing high quality equitable service to this growing section of the population in increasingly multicultural Western world.

T2-10-1 **Self-reported experiences as predictors for onset of the purchase of psychotropic drugs—a prospective study of healthy draftees**

Salokangas, Raimo K. R.¹; Heinimaa, Markus¹; Sillanmäki, Lauri²; Sourander, Andre²

¹University of Turku, Psychiatry, Finland; ²University of Turku, Child Psychiatry, Finland

Background: Onset of psychosis is often preceded by prodromal symptoms. There are few community-based studies on predictors of psychosis in healthy people.

Aim: To study how self-reported prodromal symptoms predict onset of psychotropic medication in healthy draftees.

Methods: Altogether 2330 18-year-old Finnish draftees at call-up in 1999 completed the PROD screen comprising 21 symptom items divided into positive, negative and general symptom categories. Information about purchases of psychotropic drugs between 2000 and 2005 was received from the nationwide Drug Prescription Register. The association between PROD symptoms and purchases of medication was analysed in Cox regression survival analysis.

Results: A majority of the PROD items significantly predicted purchases of all psychotropic and of antipsychotic drugs, separately. Positive, negative and general symptoms predicted purchases of all psychotropic drugs, while negative and general symptoms predicted purchases of antipsychotic drugs. General symptoms, in particular anxiety, had a strong independent association with onset of psychotropic medication.

Conclusions: In young healthy men, self-reported sub-clinical psychic symptoms predict onset of psychiatric disorders requiring psychotropic, including antipsychotic medication.

T2-10-2 **School performance of 141 high-risk offspring and future mental disorders—results from the Helsinki High-Risk Study**

Häkkinen, Laura; Suvisaari, Jaana; Haukka, Jari; Lönnqvist, Jouko

National Public Health Institute, Finland

Background: Schizophrenia and other noneffective psychotic disorders have been associated with premorbid problems in social, cognitive, and motor development, and with intellectual decline. Poor school performance has predicted future development of schizophrenia in some previous cohort and case-control studies.

Aims: To investigate if school performance of high-risk (HR) offspring (offspring of mothers with schizophrenia spectrum psychosis) associated with future psychiatric morbidity.

Method: We used information from school reports of 141 HR and 135 control children to assess whether school performance predicts future mental disorders.

Results: HR and control children did not differ in their school performance. Schizophrenia was predicted by poor performance in handicrafts and sports, and by poor overall performance during the final school year. Hospital-treated non-psychotic disorders were predicted by poor performance in both theoretical and practical subjects.

Conclusions: Among HR children, poor performance in school is predictive of future psychiatric morbidity. Offspring who develop schizophrenia spectrum disorders have problems in practical subjects, possibly related to problems in motor coordination, while school problems are broader and less specific in offspring with future non-psychotic disorders.

Declaration of interest: None. Funding detailed in Acknowledgements.

T2-10-3

Criminal autistic psychopathy

Fitzgerald, Michael

Health Service Executive, Department of Psychiatry, Ireland

This paper will examine Criminal Autistic Psychopathy. The vast majority of persons with autism and Asperger's syndrome are highly ethical. A tiny minority who end up in prison or in criminal activities not leading to prison have major empathy and interpersonal difficulties. These can lead to fatal acts of aggression. This paper focuses on differential diagnosis, neuropsychology, neurochemistry, and neuroimaging studies of this very serious and important condition even though it is rare.

T2-10-4

Socio-emotional remediation for persons with autism spectrum disorder or other developmental disabilities

Eliez, Stephan¹; Dukes, Danny¹; Martinez, Sonia¹; Pasca, Catherine¹; Lothe, Amelie²; Glaser, Bronwyn¹

¹University of Geneva, Child and Adolescent Psychiatry, OMP, Switzerland; ²CERMEP, Cermep-Imagerie du vivant, France

Individuals with autism and 22q11.2 deletion syndrome spend significantly reduced time exploring the eye region of faces and show impairment in understanding and discerning emotional content and expressions, deficits that correlate with increased levels of anxiety. While much is known about the impact of impaired face processing on emotion recognition and social skills, there is a paucity of effective tools that can be used to teach children about faces and emotions. The current study introduces VisAVis, a web-based computerized software program that works on working memory, emotion recognition, and focusing on the eyes of the face,

and is designed specifically for mentally retarded children. Twenty-eight subjects (aged 8–16) with autism, 22q11.2 deletion syndrome, or idiopathic developmental delay, completed the twelve-week VisAVis program and underwent cognitive-behavioral evaluations and functional MRI pre-remediation (T1), post-remediation (T2), and 12 weeks post-remediation (T3). Results showed marked improvement on the Attention/Concentration index score of the CMS ($N = 28$, $F(2, 46) = 4.332$, $p = .041$, $T1 < T2$ and $T3$) and nonverbal reasoning after remediation at T2 and T3 ($N = 21$, $F(2, 40) = 4.283$, $p = .026$, $T1 < T2$ and $T3$), recognition of the seven universal emotions at T2 and T3 ($N = 28$, $F(12, 486) = 2.127$, $p = .020$, $T1 < T2$ and $T3$), increased time spent on the eye area of the face at T2 and T3 and reduced time spent on the mouth at T2 and T3 ($N = 19$). In addition, a priori functional ROI analyses showed increased functional response (BOLD) to faces at T2 in areas important for face processing, including prefrontal regions and fusiform gyrus. To our knowledge, VisAVis is the first software program to be validated using standardized behavioral and neuroimaging measures. It also represents one of the first reliable tools for working on socio-emotional impairments and for targeting cerebral hypoactivation to faces in hard-to-treat pediatric populations.

T2-11-1

When individual therapy is not enough—Theraplay as a treatment for traumatized children

Carlsson, Teija¹; Tuomi, Kirsi²

¹Private practitioner, Finland; ²Palvelukeskus Luovat Tuulet, Finland

The purpose of the presentation is to introduce a new way of working with multi-traumatized children. The paper is based on the presenters' long experience working as a therapist in a residential child care institution and in the field of foster care. Attachment theory as a framework is acknowledged worldwide to be a suitable approach when working with children in care. In many cases these children have been traumatized from pregnancy. They have often been exposed to violence, and their parents might have had substance abuse and mental health problems. Consequently the problems lay often on the field of attachment. Clinical experience shows that traditional individual music therapy seems to help these children. However something is missing. The gap between the therapy session and every day life was too wide which emphasizes especially with small children. Theraplay is a structured therapy method, which focuses on the interaction of the child and his/her primary caregiver. Combining the framework of Theraplay and music therapy methods seems to provide a powerful way to help these children. With this approach also the disorders of attachment can be treated better and the transferability of therapy to everyday life increases. The interaction treatment starts after a music therapy assessment in individual setting and an interaction assessment of the primary caregiver and the child. At this point methods such as MIM (Marshak Interaction Method) and WMCI (Working Model of the Child Interview) are used. The methods of music therapy are introduced. The presentation focuses on children under 4 years of age but the framework can also be applied up to adolescents. The presentation is illustrated by case examples and video material.

References:

1. Jernberg AM, Booth PB (2010) Theraplay. helping parents and children build better relationships through attachment-based play, 3rd edn. Jossey-Bass, San Francisco

T2-11-2 Intensive Theraplay for a previously maltreated adopted child with explosive behavior

Lindaman, Sandra

The Theraplay Institute, USA

Theraplay, an attachment focused treatment using structured sequences of affective attunement and co-regulation of physical and emotional states, was used to calm and reassure a 6.5 year old frequently dysregulated child and give her experiences of pleasure and closeness with her adoptive parents. This child experienced gross neglect with her low functioning biological parents until the age of 2.5 years. When placed with her adoptive parents, she refused physical closeness, had tantrums and was difficult to parent. Various reward systems and consequences did not change her behavior over the next 4 years. At the time of Theraplay treatment she displayed mood shifts, with frequent explosive tantrums and defiance at home and school. The parents and child completed an interaction assessment, five 40 min Theraplay sessions and five 60 min processing and parent education sessions over a 3 day period of time. The parents participated in each session and were guided by the therapist to interact with the child in an attuned, playful and nurturing manner; the child accepted these interactions. The parents made these types of interactions part of their daily life at home. They reported an immediate improvement in the child's behavior; she was calmer, happier and more accepting of their care and direction; results were maintained at 6 month follow up. While this particular treatment was brief, the case serves as an example of the needs of many adopted children, that is: to experience attunement and regulation; to trust and accept parental structure; to develop mutuality and engagement, to receive and accept nurturing from parents; to feel competent and worthy; and to feel claimed as part of a family.

Reference:

1. Booth PB, Lindaman S (2000) Theraplay: a short-term treatment for enhancing attachment in adopted children. In: Kaduson H, Schaefer CE (eds) Short-term play interventions with children. Guilford, New York

T2-11-3 Does Theraplay increase emotional availability among substance-abusing mothers and their infants?

Salo, Saara

Helsinki University Hospital, Psychiatric clinic for small children, Finland

Background: Maternal substance-abuse is a risk factor in infant development, and early interaction has been suggested to play a key mediating role. Indeed, emotional availability comprising of maternal sensitivity, structuring, nonhostility and nonintrusiveness and infant responsiveness and involvement has already been shown to be low among this population. Theraplay as an active, dyadic short-term interactional therapy aims specifically at increasing maternal emotional availability in the here-and-now moments with the infant based on the emotional and behavioral cues of the infant. Therapists structures weekly play sessions based on the developmental age of the infant and the relational quality of the mother-infant pair. Each session involves nurturing elements in the form of soothing touch such as

massage, rocking, gentle lotioning, interactive playfulness such as bubbles, and singing and developmental challenges such as playing with cotton balls, jumping up and down etc. Maternal reflective functioning is promoted by separate video-feedback discussions held regularly in between the play-sessions.

Subjects: 12 mother-infant dyads participating in the treatment of Helsinki Mother-Child Home for Substance-Abusing mothers participated in the study. 7 dyads received Theraplay intervention in addition to other treatment provided in the facility, and 5 dyads were controls (not receiving Theraplay but everything else). Emotional availability was evaluated using the EAS4th ed. before and after intervention in both groups.

Results: Maternal sensitivity and child's involvement increase after Theraplay intervention among the study group as compared to controls.

Conclusions: Given that positive affectivity and infant's capability of social referencing and joint attention are held to be key aspects in the secure attachment relationship, Theraplay may have a unique input in the multimodal treatment offered for substance-abusing mothers and their infants.

T2-11-4 Can Theraplay increase parental sensitivity and child well-being in child psychiatric and foster care families?

Mäkela, Jukka

National Institute for Health and Welfare, Department of Children, Young People and Families, Finland

Background: We present results from two studies evaluating the impact of Theraplay intervention on parent-child interaction quality. Theraplay is a short-term, attachment-based parent-child intervention utilizing interactive, dyadic play. Non-symbolic, interactional play is used to create instances of enjoyment and pleasure, of mastery and surprise. The parents are first observing and reflecting on what they see and feel from behind a monitor with their own therapist, being helped to see, appreciate and understand what new aspects the child is showing in his or her being. After a few sessions, the parents participate in the sessions together with the child and the therapists. Video-feedback sessions are held separately throughout the therapy process.

Aim: The aim of the two studies was to evaluate the impact of a Theraplay intervention on parent-child interaction quality and child-well being.

Subjects: In these two, separate studies, child-parent dyads from child-psychiatric units at the Helsinki University Hospital (n = 19) and foster child-parent dyads living in SOS-children's village (n = 22) participated in a Theraplay intervention. The age range was from 2 to 15 years. Child well-being and parent-child interaction quality was evaluated before and after therapy using questionnaires (e.g., CBCL) as well as videotaped observation methodology.

Results: The results show that there were statistically significant changes in the parent-child interaction quality in both groups. Among child-psychiatric patients, parental sensitivity and playfulness increased, and the child's responsiveness and involvement increased. Among foster children, foster parents sensitivity increased also as compared to clinical controls. Finally, child-well being improved in both groups.

Conclusions: Theraplay-intervention may help in increasing parental sensitivity and child openness to interaction among child-psychiatric and foster children.

T2-11-S**Theraplay: a therapy using engaging, interactive play to foster healthy attachment and child well-being***Mäkelä, Jukka*

National Institute for Health and Welfare, Department of Children, Young People and Families, Finland

The aim of this symposium is to demonstrate the possibilities of a novel approach to the treatment of relationship and attachment disturbances. All four presentations will focus on different aspects of Theraplay, a structured form of engaging dyadic parent–child therapy. Theraplay is a short-term, attachment-based intervention utilizing non-symbolic, interactional play to re-create experiences of secure attachment formation. The interactive sequences are carefully structured by the therapist to make possible the pleasure of being together and the shared enjoyment in the child's mastery. These elements of shared positive emotions may be a crucial in restructuring the attachment relationship towards greater organization and security. At the same time, Theraplay uses the principles of social learning therapies to promote positive parenting. The first two presentations will give back-ground to the theory and practice of Theraplay, and results on changes on the parent-child relationships from three pilot-studies. The first is with patients from child psychiatric patients of the Helsinki University Hospital, the second with children in long-term foster care with clinical symptoms of attachment disturbances (treated together with their foster parent), and the third from drug-abusing mothers and their babies in Institutional care. In all of these there was improvement in many facets of the parent-child relationship as coded from video interaction assessments as well as in questionnaire-assessed child well-being. Third, there will be a detailed case-presentation of Theraplay in helping a traumatized adoptive child with strong externalizing symptoms. With video-clips from the actual treatment, it shows how a short, intensive series of sessions brought about marked change in both the parents parenting and in the child's well-being. The fourth presentation shows with video-clips from cases how Theraplay combined with music therapy can bring help to traumatized foster children.

T4-01-1**Why practitioners are crucial for proving effectivity of treatment***Vermeiren, Robert*

Leiden University Medical Center, Child and Adolescent Psychiatry Curium-LUMC, The Netherlands

In many countries, caregivers are being pressured by authorities and funding agencies to show that mental health care is effective. Though understandable for reasons of cost-effectivity in times of economical scarcity, 'proof' is currently lacking for most interventions. One reason for this is the over-emphasis of academics on studies with optimal designs (randomized controlled trials-RCT). The debate currently centers on the necessity to conduct such efficacy studies (well-controlled research), and whether they can (partly) be replaced by effectiveness studies (natural/clinical setting research). It is widely recognized that efficacy studies are difficult to execute. And when efficacy is proven, little is known on the results of evidence-based interventions provided in daily clinical practice, on the working components of existing interventions, on interventions for specific subgroups, ... While efficacy studies are without doubt most optimal for

proving an intervention's intrinsic benefit, the speaker will elaborate on their limitations. For many conditions, efficacy studies cannot be organized. Therefore, a plea will be held to conduct effectiveness studies such that alternative quasi-experimental conditions are met. Such designs do however require academics to accept the inherent complexity of clinical practice, and practitioners to standardize interventions and implement methods of outcome measurement. The lecture will be illustrated with examples from the forensic field. With this lecture, the speaker main aim is to bridge the gap between clinical practice and research, in order to advance the field.

T4-02-1**Adolescent eating disorders—state of the art***Herpertz-Dahlmann, Beate*

RWTH Aachen, University Clinics, Department for Child and Adolescent Psychiatry, Germany

Eating disorders of adolescence have morbidity and mortality rates that are among the highest of any mental disorders and are associated with significant functional impairment. This presentation tries to cover **psychological and psychiatric aspects** of anorexia and bulimia nervosa, new issues in classification of eating disorders and the interplay of **somatic and behavioural alterations** provoked by starvation with an emphasis on neuroendocrinological and neuro-psychological changes. In addition, new findings in **structural and functional neuroimaging** will be demonstrated. The presentation will also review current trends in epidemiology and highlight the importance of diagnosing psychiatric comorbidity. Besides the outcome of different treatment settings a **multimodal treatment approach** comprising nutritional rehabilitation, nutritional counselling, individual psychotherapy and family-based interventions emphasizing a group psychoeducation program for parents will be presented. Both eating disorders are marked by a serious course and outcome with high continuities of both the eating and the comorbid psychiatric disorder. Several prognostic factors and hypotheses to alleviate outcome will be discussed.

T4-03-1**Child abuse as a risk factor for non-suicidal self-injury (NSSI) in children and young adolescents***Martin, Graham*

The University of Queensland, Child and Adolescent Psychiatry, Australia

Background: Past studies have suggested sexual abuse may be a main risk factor for later self-injury; more recent studies have suggested physical abuse as more important.

Aim: The paper will explore relative impacts of various forms of abuse, as well as correlates and confounders in the pathways to self-injury.

Materials and methods: We will draw on 3 of our major recent Australian Databases: The Australian National Epidemiological Study of Self-Injury [12,006 subjects, including 1,475 children aged 10–17 years (12.3%)]; the first wave of a longitudinal study into young adolescent self-injury (2,600 subjects, aged 12–15); a unique comparative study of 40 child inpatient self-injurers compared with 40 matched non self-injuring child inpatients (aged 8–13).

Results and conclusions: In the national study, odds of NSSI among those with any experience of child maltreatment were higher than for those with none (males: OR 2.89, 95% CI 1.69–4.93) (females: OR 4.18, 95% CI 2.72–6.42). When maltreatment types were analysed separately, odds were highest for physical abuse (OR 3.61, 95% CI 2.44–5.34) followed by neglect (OR 3.01, 95% CI 2.03–4.45) and sexual abuse (OR 1.75, 95% CI 1.13–2.71). In contrast, for the inpatient study, the only factors to discriminate between self-injuring children compared to matched non-injurers, were whether they had single parent status, and had been sexually abused, $\div 2 (1, 80) = 10.32, p = 0.001$. These apparent contradictions will be discussed in terms of what is known about the aetiology of self-injury, the clinical implications, and opportunities for prevention in the community.

T5-01-1

Overview of current ADHD guidelines

Mushtaq, Imran

St Alban Specialist Child and Family Centre, UK

Aims: To provide an overview of the current Attention Deficit Hyperactivity Disorder (ADHD) guidelines in the Europe and critical review of their implementation.

Presentation: The presentation will discuss the main ADHD guidelines, such as NICE1 (U.K), SIGN2 (Scottish) and European guidelines3 in terms of their key recommendations about ADHD assessment and management, similarities and differences. It will also explore the current practices in European countries and challenges in terms of guidelines implementations.

Summary: The presentation will be interactive and will be sharing the good clinical practices based on ADHD guidelines and will discuss about their usefulness in clinical practice.

References:

1. Attention Deficit Hyperactivity Disorder-Diagnosis and management of ADHD in children, young people and adults. Sep 2008. CG 72 guidelines
2. Management of attention deficit and hyperkinetic disorders in children and young people. Oct 2009, Scottish Intercollegiate Guidelines Network (SIGN)-112
3. Taylor E, Döpfner M, Sergeant J et al (2004) European Clinical guidelines for hyperkinetic disorders-first upgrade. Eur Child Adolesc Psychiatry [Suppl 1] 13:1/7–1/30

T5-01-2

Group interventions for ADHD and other neurodevelopmental disorders

Keskinen, Minna

Social Psychiatric Services, Neurodevelopmental Rehabilitation Team, Finland

According to the most recent guidelines Behaviour interventions and Parent support are integral component of non-medicinal management of Children with ADHD and other neuropsychiatric disorders. These children have moderate to severe degree of difficulties in communication and social skills that can result in problems in family life, education and social relations outside the family leading to significant impairment in functioning. The presentation will describe the model

developed in Ostrobothnia region of Finland for children with neurodevelopmental disorders in conjunction with Department of Child Psychiatry Seinajoki Central Hospital. To maximise the benefit, a more integrated approach was used by working both on children and parents' groups as part of meticulously planned package that had consistency around the contents and goals for both children and parents' groups. The presenter will share the outcomes and efficacy of this Integrated Group Interventions approach in light of their experiences so far and through discussion at the workshop will attempt to develop further ideas for more effective use of group intervention in children with neurodevelopmental disorders.

T5-01-3

Developing Integrated Carepathways for ADHD

Hoare, Peter

University of Edinburgh, Child and Adolescent Psychiatry, UK

There is a strong drive in the National Health Services in the UK to develop evidence based, streamlined Integrated Care Pathways (ICP) for most of the medical conditions that would ensure high quality services and good outcomes, as measured against certain set standards. The presentation will describe the development of the model of Interagency Care pathways for ADHD that has involved a multidisciplinary expert group from across the UK including the author as key member. The Integrated Care Pathways follow a patient journey and would provide a practical tool to the clinicians working in range of settings from primary care to multidisciplinary secondary/tertiary services.

T5-01-S

Developing a coherent service model for ADHD care-from guidelines to practice

Sandhu, Tanveer¹; Mushtaq, Imran²; Keskinen, Minna³; Hoare, Peter⁴

¹Birmingham Children's Hospital, Child and Adolescent Psychiatry, UK; ²St Alban's Specialist Child and Family Service, UK;

³Ostrobothnia Neurodevelopmental Rehab Team, Finland;

⁴University of Edinburgh, Child and Adolescent Psychiatry, UK

Background: ADHD is a lifelong disorder which presents predominantly in childhood but with significant number continue to have the disorder into adulthood. ADHD is now well established as a medical condition with sound evidence through neuroimaging, genetics and epidemiology. The ADHD/HD worldwide-pooled prevalence is 5.29% (Polanczyk et al 2007). It is a public health issue of significant impact on society that needs a coherent service model across Europe. Medication has been an effective and evidence based intervention for many decades. However in last two decades there has been increasing interest in multimodal approach for a holistic care of ADHD. The MTA Study has shown that combined behaviour and medication is more effective than medication or behaviour interventions alone. There is also increasing evidence that co-morbidity is a rule than exception in ADHD and even 70% might have co morbid disorders (Brown et al, 09). This creates further challenges as to develop service model that could best meet the needs of these patients.

Methods: In this 120 min workshop we will use 90 min of three interactive lectures 30 min each and 30 min of group discussion,

quick audience survey, comments and questions. The workshop will provide an overview of the current main guidelines and critically review the issues in their implementation. It will also examine the existing clinical practices in terms of ADHD management and service models in European countries against the European and various other guidelines. The workshop will provide an excellent opportunity to share good practices in Europe for a streamlined ADHD Care. Through interactive discussion with the audience the workshop will attempt to create clear recommendations for a potential services model that can reflect the best compliance with guidelines and multimodal approach.

References

1. The MTA Cooperative Group (1999) Multimodal Treatment Study of Children with ADHD. *Arch Gen Psychiatry* 56(12):1073–1086

T5-02-1

Adverse experiences and brain structures among depressed adolescent psychiatric outpatients

Karlsson, Linnea¹; Marttunen, Mauri¹; Karlsson, Hasse²; ADS, Study Group³

¹National Institute for Health and Welfare, Mental Health and Alcohol Research, Finland; ²University of Turku, Clinical Sciences, Finland; ³National Institute for Health and Welfare, Clinical Sciences, Finland

Background: There is accumulating evidence from both preclinical and clinical research that early adverse experiences (EAE) may affect brain structures. Assessing these structural alterations could be helpful in understanding processes in the development, e.g. mood disorders.

Method: Subjects for this study are derived from a larger cohort of depressed adolescent psychiatric outpatients and their school-based control group (Adolescent Depression Study, ADS) in young adulthood. Three groups are included: 1. subjects with EAE and history of depressive disorder, 2. subjects with history of depressive disorder but no EAE, and 3. healthy controls with no EAE. Brain scans are performed by 3T magnetic resonance (MR) device and volumes of selected brain areas (hippocampus, amygdala, anterior cingulate, prefrontal cortex) are compared between the groups.

Results and conclusions: In all, $n = 28$ MRIs have been performed. The results will be presented and discussed in the presentation.

T5-02-2

Association between childhood maltreatment and adult emotional dysregulation: moderation by oxytocin receptor gene

Heim, Christine; Westen, Drew; Jovanovic, Tanja; Binder, Elisabeth B.; Crain, Daniel; Wingo, Alizia; Bradley, Bekh

Emory University School of Medicine, USA

The ability to effectively regulate emotions as well as a secure attachment style are critical for maintaining mental health across the lifespan. We investigated the impact of childhood maltreatment and an oxytocin receptor (OXTR) single nucleotide polymorphism (SNP), rs53576, and the interaction of both, on emotional dysregulation and

attachment style in adulthood in a sample of low income, African American men and women recruited from primary care clinics of an urban, public hospital. We found that the severity of childhood maltreatment was associated with increased levels of emotional dysregulation in adulthood. Childhood maltreatment was also positively associated with ratings of disorganized/unresolved adult attachment style and negatively associated with ratings of secure adult attachment style. There was no direct association between rs53576 and emotional dysregulation or ratings of adult attachment style. However, there were significant interactions between rs53576 and childhood maltreatment in predicting level of adult emotional dysregulation and attachment style. Specifically, G/G allele carriers were at risk for increased emotional dysregulation when exposed to 3 or more categories of childhood abuse. In addition, G/G allele carriers exhibited enhanced disorganized adult attachment style when exposed to severe childhood abuse compared to A/A and A/G. Our findings suggest that A/A carriers of OXTR rs53576 are resilient against the effects of severe childhood adversity, by protection against emotional dysregulation and disorganized attachment.

T5-02-3

Blunted cortisol responses to stress signals social and behavioural problems among maltreated/bullied 12 year-old children

Ouellet-Morin, Isabelle; Odgers, Candice; Danese, Andrea; Bowes, Lucy; Shakoor, Sania; Papadopoulos, Andrew S.; Caspi, Avshalom; Moffitt, Terrie E.; Arseneault, Louise

Institute of Psychiatry, UK

Background: Evidence from animal and human studies suggests that early-life stress such as physical maltreatment has long-lasting effects on the limbic-hypothalamic-pituitary-adrenal (LHPA) axis and is associated with a blunted cortisol reactivity to stress in adulthood. Few studies have investigated whether blunted cortisol reactivity to stress observed in children exposed to early-life stress signals social, emotional and behavioral problems.

Methods: Participants were 190 12 year-old children (50.5% males) recruited from the Environmental Risk (E-Risk) Longitudinal Twin Study, a nationally-representative 1994-1995 cohort of families with twins. Cortisol responses to psychosocial stress were measured in maltreated/bullied ($n = 64$) and comparison children ($n = 126$). We prospectively collected reports from mothers about maltreatment, from mothers and children about bullying victimization and from mothers and teachers about children's social, emotional and behavioral problems at ages 5 and 12.

Results: Piecewise multilevel growth curve analyses indicated that the maltreated/bullied and comparison children showed similar baseline cortisol secretion but had distinct cortisol responses to stress. Specifically, maltreated/bullied children had blunted cortisol responses than comparison children, who exhibited a significant increase. Importantly, this blunted cortisol reactivity to stress was associated with more social and behavioral problems and fewer prosocial behaviors among maltreated/bullied children.

Conclusions: These findings provide additional support for the enduring effects of childhood harm on cortisol reactivity to stress. Because maltreated/bullied children with lower cortisol reactivity to stress also had more social and behavioral problems, our findings emphasize the need to integrate stress biomarkers in prevention efforts of social and behavior problems among at-risk children.

T5-02-4**Parental regulation of the neural epigenome***Meaney, Michael J*

McGill University, Sackler Program for Epigenetics and Psychobiology, Canada

Maternal care shapes the development adaptive behavioral and endocrine responses to stress in mammals. The mechanisms for these maternal effects¹ involve stable changes in gene expression that derive from direct effects on the epigenetic state of genomic regions that regulate the transcription of genes implicated in the regulation of stress responses. This presentation will review evidence for the epigenetic regulation of hypothalamic-pituitary-adrenal (HPA) function in human and nonhuman models. These studies support the view that environmental events can directly influence the epigenome. More recent findings from genome-wide analyses of DNA methylation in response to variations in maternal care in the rat suggest parental influences on DNA methylation across wide regions of the genome, including genes involved in neural development.

T5-02-S**Traumatic experience and the brain***Karlsson, Hasse*

University of Turku, Finland

Karlsson L, Marttunen M, Karlsson H. Adverse Experiences and Brain Structures Among Depressed Adolescent Psychiatric Outpatients Heim C, Westen D, Jovanovic T, Binder EB, Crain D, Wingo E, Bradley B: Association between Childhood Maltreatment and Adult Emotional Dysregulation: Moderation by Oxytocin Receptor Gene Quillet-Morin I, Odgers C, Danese A, Bowes L, Shakoor S, Papadopoulos AS, Caspi A, Moffitt TE and Arseneault L: Blunted cortisol responses to stress signals social and behavioural problems among maltreated/bullied 12 year-old children Michael Meaney: Parental regulation of the neural epigenome First study: Three groups from depressed adolescent psychiatric outpatients and their school-based control group in young adulthood were included: 1. subjects with early adverse experience (EAE) and history of depressive disorder, 2. subjects with history of depressive disorder but no EAE, and 3. healthy controls with no EAE. Brain scans were performed using a 3T MR device and volumes of selected brain areas were compared between the groups. Second study: The impact of childhood maltreatment and an oxytocin receptor (OXTR) single nucleotide polymorphism (SNP), rs53576, and the interaction of both, on emotional dysregulation and attachment style in adulthood in a sample of low income men and women recruited from primary care clinics. Third study: whether blunted cortisol reactivity to stress observed in children exposed to early-life stress signals social, emotional and behavioral problems. The participants were 190 12 year-old children recruited from the E-Risk Longitudinal Twin Study, a nationally-representative cohort of families with twins. Cortisol responses to psychosocial stress were measured in maltreated/bullied (n = 64) and comparison children (n = 126). Fourth study is presented by Michael Meaney and its main message is that maternal care shapes the development adaptive behavioral and endocrine responses to stress in mammals. The mechanisms for these involve stable changes in gene expression genes implicated in the regulation of stress responses.

T5-03-1**Slowing the swings but supporting the unsteadiness**

Genet, Marie-Camille¹; Garez, Valerie²; Valente, Marina²; Devouche, Emmanuel³; Carlberg, Elsa²; Richerd, Damaris⁴; Jarlot, Sylvie⁵; Grandin, Sophie⁵; Le Nestour, Annick⁵; Apter, Gisele⁶

¹EPS ERASME (PPUMMA, RePPER), Université PARIS V R. DESCARTES, France; ²EPS ERASME (PPUMMA, RePPER), France; ³EPS ERASME: RePPER, Université PARIS V R. DESCARTES, France; ⁴EPS ERASME: PPUMMA, France; ⁵EPS ERASME: AUBIER, France; ⁶EPS ERASME (PPUMMA, RePPER), Université PARIS VII D.DIDEROT, France

Abstract of the second presentation of the pre-arranged workshop: Innovation and management in difficult contexts: Emergency perinatal care, infant mental health and maternal borderline personality disorder Our team has now been leading an ongoing longitudinal study with mothers diagnosed with personality disorders, specifically with borderline personality generally linked to history of abuse, trauma and neglect. These mothers represent over 20% of the patients referred to the emergency perinatal psychiatry unit. We aimed to examine the specificities of these psychopathological situations during the peripartum, in order to ameliorate management strategies for this population, as well as to develop knowledge on transmission of trauma through interactive processes. Microanalysis of mother-infant interaction of 92 dyads using the Still Face, Face-to-Face Paradigm showed that Borderline personality mothers and their three-month old infants were involved in a number of behaviors that paradoxically combined paucity of variation in interaction and excessiveness of initiation and excitement in those same interactive sequences. As a result, the infant is then faced with the necessity to follow its mother as much as possible, to both satisfy her, and its own agenda. The regulatory effort is visible through different behaviors. This shows us how a minor stress, in case of a tense and already challenging relationship enhances disorganization with much more dysregulation on the part of the infant henceforth rendering its mother unable to re-establish an already fragile relationship. How this should impact therapeutic management will be presented by describing different intervention techniques. It seems necessary to implement early interventions emphasizing infant emotional scaffolding while supporting maternal emotional regulation and treatment of maternal mood variation.

T5-03-2**Pounce and prevent!**

Garez, Valerie¹; Genet, Marie-Camille²; Heroux, Caroline³; Valente, Marina¹; Carlberg, Elsa¹; Richerd, Damaris³; Godreaux, Stephanie³; Le Nestour, Annick⁴; Apter, Gisele⁵

¹EPS ERASME (PPUMMA, RePPER), France; ²EPS ERASME (PPUMMA, RePPER), Université PARIS V R. DESCARTES, France; ³EPS ERASME: PPUMMA, France; ⁴EPS ERASME: AUBIER, France; ⁵EPS ERASME (PPUMMA, RePPER), Université PARIS VII D.DIDEROT, France

Abstract of the first presentation of the pre-arranged abstract: Innovation and management in difficult contexts: Emergency perinatal care, infant mental health and maternal borderline personality disorder PPUMMA: Perinatal Psychiatry Emergency Mobile Unit for Maternity Wards is an emergency liaison psychiatry unit that serves a

catchment area of over 600,000 population corresponding to 12,500 births per year. The Unit is part of a network of general perinatal health that manages links between professionals, in order to provide comprehensive management of medical, obstetrical, pediatric, psychiatric, psychological and social issues during the peri-partum. During 2008, 180 new patients were referred to and evaluated by PPUMMA Unit; 31 were still being followed from the previous year. One third had a unique intervention and two thirds needed a complex management associating more than one type of treatment: psychopharmacology adapted to pregnancy and/or lactation, referral to a part-time or full-time mother-baby unit, specific psychotherapy during the pre-partum, mother-infant psychotherapy during the postpartum, mother-baby psychotherapy. We will present: an analysis of referrals detailing the different diagnostic categories using ICD 10 (psychotic disorders, mood disorders, personality disorders, and stress disorders), and the therapeutic program offered (modification and/or introduction of adapted psychopharmacology, specific peri-partum psychotherapy). Data will be discussed according to known history of psychiatric disorders, past existing or ongoing treatment, specificity of intervention and immediate known outcome.

T5-03-S

Innovation and management in difficult contexts: emergency perinatal care, infant mental health and maternal borderline personality disorder

Genet, Marie-Camille¹; Garez, Valerie²; Valente, Marina²; Devouche, Emmanuel³; Heroux, Caroline⁴; Richerd, Damaris⁴; Carlberg, Elsa²; Godreaux, Stephanie⁴; Jarlot, Sylvie⁵; Grandin, Sophie⁵; Le Nestour, Annick⁵; Apter, Gisele⁶

¹EPS ERASME (PPUMMA, RePPeR), Université PARIS V R. DESCARTES, France; ²EPS ERASME (PPUMMA, RePPeR), France; ³EPS ERASME: RePPeR, Université PARIS V R. DESCARTES, France; ⁴EPS ERASME: PPUMMA, France; ⁵EPS ERASME: AUBIER, France; ⁶EPS ERASME (PPUMMA, RePPeR), Université PARIS VII D.DIDEROT, France

The aim of this workshop is to describe specific therapeutic settings that reach out towards populations that have up until now been difficult to reach. Perinatal care is now a justified approach in countries such as France, with a public funded health system providing for the whole of the population. However, ways of screening for, referring, and then managing specific cases still need to be implemented. Two different situations will be described in our workshop: First, we will present an emergency perinatal psychiatry liaison unit (PPUMMA) that works with maternity wards in an area serving a population of 600,000, with 12,500 births a year. Comprehensive data including, diagnosis, type and duration of treatment will be provided for 215 cases seen from 01-01-2008 to 31-12-2008. Second, we will detail situations where mothers have a personal history of abuse, trauma and neglect and receive a diagnosis of Borderline Personality Disorder. We will study how this unfortunately frequent condition dictates their emotional reactions and impedes the infant's and their own emotional regulatory capacities. We will unfold the specifics of the context and the treatment that was implemented in this clinical population representing over 20% of the PPUMMA referrals. The particular therapeutic tools used are based, on one hand on existing knowledge, and on the other on creative work in progress. They will all be described. To continue to strengthen and further develop innovative services, these experiences need to be analyzed. How this may serve to inspire different forms of management and care in other contexts will be open to discussion.

T5-04-1

Gathering and sharing evidence-based knowledge among professionals: the Dutch approach

de Ruijter, Ariëlle¹; Minderaa, Ruud²

¹Dutch national knowledge centre for child and adolescent psychiatry, The Netherlands; ²Accare, University Center Child and Adolescent Psychiatry, The Netherlands

In the Netherlands, the *Dutch National Knowledge Centre for Child and Adolescent Psychiatry* has been providing since 2002 *evidence-based protocols* for diagnostics, psychopharmacology in children and psychological treatment that are easy applicable in daily practice of child and adolescent psychiatry. This has been done for 12 large topics in child and adolescent psychiatry: ADHD, autism, anxiety disorders, depression, ODD, CD, early psychosis, Tourette's, eating disorders, child maltreatment and trauma, forensic psychiatry, and delirium at the pediatric intensive care unit. In 2011 5 new themes will be added. This information is available on a website (also in English), with special parts for professionals, parents and children. This website is open for everyone.

The Dutch National Knowledge Centre is a typical networking-organisation. Experts from different Dutch organisations for child and adolescent psychiatry work together related to a specific theme for about a period of 10 months. The input of the experts goes beyond interests or traditional hierarchies. Also patients and/or parents are represented, so their knowledge and experience is also integrated in the provided protocols. This unique method has proven to be very successful and the Dutch National Knowledge Centre takes a position as a central reference for workers in daily practice, and parents and children.

In this workshop, we will inform you about the ideas behind this knowledge center and give an introduction in the available products. Because the information is available in English, this workshop, in cooperation with the Swedish and UK-partners, could be a start for a *European Network* on evidence-based child and adolescent psychiatry for which interested parties will be invited.

T5-04-2

Developing client guided practice in the UK; an emerging model

Wolpert, Miranda; Jasmine, Hoffman

University College London and Anna Freud Centre, Child and Adolescent Mental Health Services Eviden, UK

This presentation will share information and resources on developing model if shared decision making in child and adolescent mental health services (CAMHS) in the UK. In particular it will explore how shared decision making is being promoted in CAMHS across the UK by the use of materials aimed at children and young people for use with their practitioners as developed by the Evidence Based Practice Unit (EBPU) and colleagues, and as freely available for all to use. Materials such as "choosing what's best for you; what scientists have found helps children and young people who are sad, worried or troubled (CAMHS 2007)" and the development of an international website to take this forward will be presented. The evidence for these approaches and their further development will be explored.

T5-04-3**Gathering and sharing evidence-based knowledge among professionals: The approach of Stockholm, Sweden***Forsbeck Olsson, Ulla¹; Bengtsson, Olav²*¹Child and Adolescent Psychiatry of Stockholm, Sweden; ²Stockholm Count Council, Sweden

In Sweden, Child and Adolescent Psychiatry of Stockholm, in a huge project last year, involving all their experts, produced guidelines based on international evidence combined with their local clinical experience. The guidelines cover Depression, Anxiety, Conduct Disorder, ADHD, Autism Spectrum Disorders, Eating Disorders, Deliberate Self-Harm, Trauma related disorders, OCD, Psychosis, Bipolar Disorder and Disorders among children 0-3 years old. The process developing the guidelines will be described as well as the implementation process.

T5-04-S**Sharing evidence-based knowledge among professionals: a Pan-European outlook on evidence-based practice initiatives in child and adolescent psychiatry***de Ruijter, Ariëlle¹; Minderaa, Ruud²; Wolpert, Miranda³; Bengtsson, Olav⁴*¹Dutch National Knowledge Centre for Child and Adolescent psychiatry, The Netherlands; ²Accare, University Centre Child and Adolescent Psychiatry, The Netherlands; ³University College London and Anna Freud Centre, Evidence Based Practice Unit, UK; ⁴Child and Adolescent Psychiatry Stockholm, Sweden

Background: In several European countries initiatives have been taken to compose, publish, share and implement evidence-based protocols or guidelines for diagnostics, medication and psychological treatment in child- and adolescent psychiatry for professionals, like psychiatrists, but also for parents and children. The media vary: e.g. websites, booklets, articles, implementation projects, and social media.

Methods: In this workshop 3 European countries share their results with the participants and more over, invite you to be part of their EU-network. From the UK, the Evidence-Based Practice Unit of the Child and Adolescent Mental Health Services of the Anna Freud centre will present their products. Established in January 2006, their aim is to develop and disseminate information about the latest research relating to helping young people with emotional and behavioral difficulties, and their families. In *The Netherlands*, the Dutch National Knowledge Centre for Child and Adolescent psychiatry has been providing since 2002 evidence-based protocols for diagnostics, medication and psychological treatment that are easy applicable in daily practice. They have done so for 12 large topics like ADHD, autism, depression, ODD, CD, early psychosis, eating disorders, child abuse and trauma. This information is available on a website (also in English), accessible for everyone, with special parts for professionals, parents and children. In *Sweden*, Child and Adolescent Psychiatry of Stockholm, in a huge project last year, involving all their experts, produced guidelines based on international evidence combined with their local clinical

experience. In spring 2011 they revised the first printed version made for internal use and published it digitally.

Results: You will receive clear and concrete information from these initiatives and get new ideas about this important work: how to 'translate' scientific results for daily practice. More over, you will be invited to join this new EU-network.

T5-05-1**A longitudinal study of behavior problems in a multiethnic community cohort of Sámi and Norwegian children in Arctic Norway***Javo, Cecilie¹; Rønning, John²*¹Sámi national centre for mental health (SANKS), Norway;²University of Thomsø, Faculty of medicine, Norway

Background: Although many child problems which manifest in early life may be transitory, studies have demonstrated that substantial stability of problems might exist from early childhood to adolescence, and sometimes might continue into adulthood. However, child problems might follow different developmental trajectories in different ethnic groups. Moreover, the impact of different risk factors might differ culturally.

Aims: The main aims of this study were (1) to compare the persistence and developmental trajectories of behavior problems in Sámi and Norwegian children from preschool to preadolescence, and (2) to compare the independent predictive values of various risk factors on child outcomes in the two ethnic groups. **Materials and methods:** The original sample consisted of 191 families with 4-year olds recruited at the "well baby" clinics within the Sámi core area in Finnmark, Northern Norway. Of the original cohort, 91% (173 mothers) participated in the follow-up. Problem reports were obtained by the Child Behavior Checklist (CBCL/4-18) and the Teacher Report Form (TRF/5-18) at age 4 and age 11 (ASEBA instruments). Data on risk factors were gained by home interviews.

Results: Preliminary results showed that the strongest persistence of problems in both ethnic groups was for the externalizing scale. However, trajectories differed between the ethnic groups. Problems declined more in the Sámi than in the Norwegian group. The most predictive risk factors were early problems and child-rearing factors at age 4, life events, social support and mother's ethnicity.

Conclusion: The study showed similarities in the persistence of childhood problems in two diverse ethnic groups, but differences in their developmental trajectories and in the impact of risk factors. The final results will be presented and discussed at the conference. The study underlies the importance of being cautious of possible ethnic differences when examining development of child behavior problems.

T5-05-2**Poor parental bonding as a unique predictor of adolescent psychopathy in boys?***Ang, Rebecca¹; Huan, Vivien²; Chong, Wan Har²; Balhetchet, Carol³; Seah, Suzanne²*¹Nanyang Technological University, Psychology, Singapore;²Nanyang Technological University, Singapore; ³Singapore

Children's Society, Singapore

Background and aims: Within adolescent psychopathy, researchers have identified key emotional and behavioral correlates such as conduct problems, impulsivity, a lack of prosocial skills and affect. The present study aims to replicate this. A recent study using a community sample (Gao et al., 2010) showed that children separated from parents in the first 3 years of life were more likely to have psychopathy in adulthood. Teenage pregnancy is a predictive risk factor for psychopathy. A second aim of the present study is to investigate whether there are gender differences in family factors such as separation from parents before age 3 and teenage motherhood that are predictive of psychopathy.

Method: The sample comprised 103 (74 girls, 29 boys) adjudicated adolescents between the ages of 11 and 16 years ($M = 14.31$, $SD = 1.14$) who are either residents of detention centers or who are under court-ordered home supervision. These adolescents present with severe delinquent and behavior problems. Parents of these adolescents were interviewed for psychosocial and family information. Parents also completed the Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997) and the Antisocial Personality Screening Device (APSD; Frick and Hare, 2001).

Results: Multiple regression analyses showed that emotional and behavioral difficulties, and prosocial behaviors were positively and negatively associated with psychopathy, respectively. Boys and girls presented with an identical pattern of results. Further multiple regression analyses showed that separation from parents before age 3 uniquely predicted psychopathy for adolescent boys ($Beta = .41$, $p < .05$) but not for girls ($Beta = .07$, ns). Teenage motherhood was not a predictor of psychopathy for either gender.

Conclusion: Findings suggest that poor early parental bonding is important in understanding risk factors for adolescent psychopathy, and this appears to affect boys more significantly than girls.

T5-05-3

The use of mental health services in the 1987 Finnish Birth Cohort

Paananen, Reija; Gissler, Mika

National Institute for Health and Welfare, Finland

At present mental health disorders are a major challenge, and they currently comprise 44% of all disability pensions in Finland. Inequalities in well-being and health have roots in childhood. These include pre- and perinatal, genetic as well as environmental risk factors across childhood years. Problems also run in families due to both social and biological processes. Research evidence is weak on providing basis for understanding life-course development of health and well-being. The aim of this study is to investigate the development of mental health, behaviour and wellbeing from childhood to adolescence by using various social and health indicators. The 1987 Finnish Birth Cohort involves a complete census of all infants born in a single year in Finland ($N = 59,476$) and subsequently followed 31 December 2008. The cohort covers detailed health and social welfare data from various Finnish registers, including various sociodemographic data of cohort members and their parents. Altogether, 16.5% of males and 23.9% of females of the cohort received psychiatric care before the age of 21 years. Psychopharmaceutical purchases were registered for 9.9% of males and 16.7% of females. In addition, 10.2% of males and 15.8% of females had received specialised psychiatric outpatient care and 5.3% of males and 5.5% of females had at least one inpatient episode. Median age for the first inpatient hospitalization was 12 years for males and 15 years for females, and median age

for the first psychopharmaceutical purchase was 19 years for both genders. Financial problems and low education seem to pass on through generations, and these are important factors for adverse psychiatric outcome in adolescence. We conclude that in times adversity, parental education and well-being predict resilience later in life. This information is crucial for successful preventive efforts.

T5-06-1

The impact of autism diagnosis on family

Andreica, Bianca¹; Patca, Sanda²; Panaete, Alina²

¹UMF Iuliu Hatieganu, Cluj-Napoca, Romania; ²SCUC Cluj, Romania

Having a child diagnosed with autism can be a challenge for any family. The study aims to identify the parental couples' emotions in order to start the process of parent involvement as a co-therapist to recover the child. Our aim is to determine the parents' emotions, whose children were diagnosed with autism disorders, how they perceive the child's pathology, their most commonly used coping mechanisms, their locus of control and the social desirability. Twenty parents were included in the study, which have at least one child diagnosed with autism. We used a questionnaire composed of five parts which covered the following: 1. Age of the child, the age at which the parent has seen the first signs of disease and the age at which the child was diagnosed with autism. 2. Identifying the emotions (and their intensity) arising from knowing the diagnosis of autism. 3. Placing the parent in one of five stages of the mourning process. 4. The description of coping mechanisms used by parents with COPE questionnaire. 5. Specifying the parent type of locus of control and social desirability using the LOC scale. The reaction to finding the diagnosis of autism varies from one family to another and may encounter a large variety: from disbelief, anger, guilt, helplessness, devastation, surprise, or even rejection of the child, to understanding and relief when finally the parents have an explanation for their child behaviors. Early intervention is important in psychological sustaining of the parent, as parent involvement in the recovery of the child with autism has a determinant role in his development and in ensuring a high quality of life.

T5-06-2

Efficiency of a small size screening instrument in identifying children with autism spectrum disorders in a large population of twins

Bilenberg, Niels¹; Nordenbæk, Claudia¹; Kyvik, Kirsten²; Skytte, Axel³

¹University of Southern Denmark, Child and Adolescent Psychiatric Dept., Denmark; ²University of Southern Denmark, Institute of Regional Health Services Research, Denmark; ³University of Southern Denmark, Odense Patient data Exploratory Network, Denmark

Background and aims: High response rates in surveys are associated with short questionnaires. The aim of the present study was to evaluate the effectiveness of screening for Autism Spectrum Disorders (ASD) by using a short scale, and to estimate the prevalence of ASD registered in twins born 1988–2000.

Materials and methods: A scale based on five Child Behaviour Checklist (CBCL) items was used in a first-phase screening in a general population of twin individuals (born 1988–2000) recruited from the Danish Twin Registry. Referral to psychiatric services in Denmark is systematically reported to the Danish Psychiatric Central Research Registry (DPCRR), and the two registers were linked for validation purposes.

Results: Parents of about 16,000 twins responded (response rate 68.4%); among them 108 were registered with an ASD diagnosis. A score of two or more points out of ten was the optimal cut-off, yielding a sensitivity of 79.6% and a specificity of 81.4%. The registry linkage identified 176 twins with a diagnosis of ASD (point-prevalence = 0.72%).

Conclusions: This study demonstrates that it is feasible to screen large populations for ASD with a 5-item questionnaire. The prevalence of registered ASD in twins corresponds to recent population-based studies in singletons.

T5-06-4

Theraplay as an early intervention—a case study of Theraplay in a family with a autistic daughter

Lampi, Hanna

Private practice, Finland

Background: Tara is the first of two children, her parents are Romanian origin but have been living in Finland for several years. Tara's parents first concerns of her health started when she was approximately 1 year of age. Parents shared their concerns with well baby clinic but they were assured that everything was fine. By the age of two parents were still worried about Tara, interaction with her had declined, e.g. she had a lot of temper tantrums and her communication skills were low. In the spring of 2009 a referral was made to child psychiatric clinic in Jorvi Hospital. Tara's interactional skills were very low so a referral was made also to the neurocognitive department where childhood autism was diagnosed. In June 2009 Theraplay started with Tara and the parents at Jorvi. The goal of Theraplay intervention was to enhance Tara capability to interact and give parents new approaches to engage Tara to interaction.

Methods: Theraplay was used for the period of 6 months at the Jorvi child psychiatric clinic. Theraplay started June 2009, first twice a week, later sessions were held once a week. Both parents attended Theraplay with Tara. The goal of Theraplay intervention was to enhance Tara capability to interact and give parents new approaches to engage Tara to interaction. As the planned Theraplay intervention closed in the end of 2009 home visits followed, on those visits Theraplay was used both in dyadic and group settings.

Results: Taras interaction improved during Theraplay and parents found new ways to interact with Tara. Treatment is still ongoing with weekly home visits. Tara has started using more words, sometimes even small sentences. She attends speech therapy twice a week and uses both pictures and signs as a communication aid. She has check-ups at both child psychiatric clinic as well as in neurocognitive department and in both there is agreement that Tara's development is positive and that Theraplay has improved her social skills.

T5-06-5

The categorization of dynamic emotional facial expressions by children with high-functioning Autism Spectrum Disorders or ADHD

Schaller, Ulrich Max; Biscaldi, Monica; Fleischhaker, Christian; Schulz, Eberhard; Rauh, Reinhold

University of Freiburg, Child and Adolescent Psychiatry and Psychotherapy, Germany

Background: High-functioning Autism Spectrum Disorders (ASD) and Attention Deficit/Hyperactivity Disorder (ADHD) are supposed to exhibit deficits in the categorical perception of facial emotions. Several studies presented evidence for these impairments while others have not. Most of these studies, however, displayed static and exaggerated emotional facial stimuli without any time restrictions.

Aim: To prove that the use of dynamic facial stimuli of basic emotions elicits distinct differences in emotion categorization between ASD and ADHD in contrast to typically developing (TD) individuals.

Method: 68 children, aged 6–13 years (ADHD: $n = 13$; ASD: $n = 29$; TD: $n = 26$) participated in the Dynamic Emotional Categorization Test (DECT): Two natural and two artificial actors (produced by a new real-time animation system—the “Agent Framework” of the Institute of Animation, Visual Effects and Digital Postproduction of the Filmakademie Baden-Wuerttemberg) displayed dynamic facial expressions of the six basic emotions on three intensity levels (weak, medium, and strong) within a time limit of 6 s. After the video clip/animation, participants had to categorize the presented facial expression in a forced choice task with the six basic emotions as options.

Results: Children with ASD descriptively showed the worst performance, but significant differences in emotion categorization could only be obtained for ASD and ADHD in comparison to TD. No significant differences were found with respect to decision time. Increased severity of social impairment (as measured by the Social Responsiveness Scale [SRS]) predicted lower performance in the DECT ($r = -.35$, $p < .002$).

Conclusions: The results strongly corroborate the assumption of a general emotion categorization impairment in ASD and ADHD. Furthermore, our study provides the first evidence for an increase of deficits of emotion categorization in ASD and ADHD by using dynamic facial animations with a high degree of ecological validity.

T5-07-1

Comparison of day hospital and outpatient treatment outcomes and trajectories of change following family-based treatment for eating disorders

Boachie, Ahmed¹; Girz, Laura²; Jasper, Karin¹

¹Southlake Regional Health Centre, Eating Disorder Program, Canada; ²University of Toronto, Department of Psychology, Canada

Family-based therapy is currently the treatment of choice for adolescent eating disorders, but few studies have examined adolescent patient outcomes and even fewer have considered parental outcomes. There are also few indicators of optimal duration of treatment. The

purpose our study was to compare adolescent and parent outcomes following family-based treatment in day hospital and outpatient settings and to explore trajectories of change for both adolescents and parents, at the paediatric Eating Disorders Program at Southlake Regional Health Centre in Canada. During assessment patients and their parents complete measures and are recommended to either outpatient or day hospital treatment. They are then reassessed at 3 and 6 months. Patient measures include the Eating Disorder Inventory (EDI), Multidimensional Anxiety Scale for Children (MASC), and Children's Depression Inventory (CDI). Parent measures include the Eating Disorder Symptom Impact Scale (EDSIS) and the Parents versus Anorexia scale (PvA). Among adolescents, scores on the CDI and MASC decreased between 3 and 6 months in the day treatment sample, but did not change significantly in the outpatient sample. Scores on the EDI also showed greater change in the day treatment sample than in the outpatient sample. Weights improved for both day treatment patients and outpatients between assessment and 3 months and by 6 months the majority of patients in both categories were over 95% IBW. In contrast to the adolescent findings, changes in parent scores were much more similar between the day treatment and outpatient samples. Parent PvA scores increased over time in both samples, with change significant between assessment and 3 months in the day treatment sample and between all three time points in the outpatient sample. In addition, EDSIS scores decreased between 3 and 6 months among parents in both samples. This study supports providing 6 months over 3 months of family-based treatment.

T5-07-2

Functional Hypothalamic Amenorrhea and Anorexia Nervosa: clinical conditions in continuum

Bomba, Monica¹; Oggiano, Silvia²; Molinaro, Anna³; Bonini, Luisa³; Gambera, Alessandro⁴; Scagliola, Pasquale⁴; Maserati, Elisa²; Neri, Francesca²; Nacinovich, Renata²

¹University of Brescia, Dep. of Child and Adolescent Neuropsychiatry, Italy; ²University of Milan Bicocca, Dep. of Child and Adolescent Neuropsychiatry, Italy; ³University of Brescia, Unit of Child and Adolescent Neuropsychiatry, Italy; ⁴University of Brescia, Day Hospital of Gynecological Endocrinology, Italy

Background: Functional Hypothalamic Amenorrhea (FHA) is a common and reversible form of anovulation, not associated to any identifiable organic causes. Stressful events have been demonstrated to be triggers for the onset of the disorder and psychological assessments have shown the presence of dysfunctional attitudes, depressive and anxiety traits, an altered attitude towards eating and, moreover, a higher prevalence of subclinical eating disorders in women with FHA. **Aim(s):** To evaluate psychopathological traits of adolescents with anorexia nervosa (AN) and FHA, and to examine a possible correlation between these two conditions in terms of clinical profile and psychological pattern.

Materials and methods: 21 girls, diagnosed with AN, 21 girls (\bar{x} 18 years) with FHA and a control group of 21 healthy girls were enrolled. Children's Depression Inventory (CDI), Eating Disorder Inventory-2 (EDI-2), Toronto Alexithymia Scale-20 (TAS-20), Minnesota Multiphasic Personality Inventory-Adolescent (MMPI-A) were administered.

Results: At the EDI-2 test, both subjects with AN and subjects with FHA show higher scores compared to the control group, but the former obtain even higher scores than the latter in the subscales of Drive to Thinness, Maturity Fears and Social Insecurity. At the CDI a statistical difference between patients with FHA and healthy controls emerge, but subjects with AN present higher scores compared to both groups. At the TAS there is a statistical difference between patients

and controls, but anorexic girls score higher in the subscale of difficulty to identify feelings when compared to the other two groups. Patients score higher than healthy controls in the subscales of Depression, Masculinity/Femininity and Introversion of MMPI-A, but patients with AN show higher scores in various other subscales.

Conclusions: Our findings suggest that AN and FHA lie on a clinical continuum, in which the former presents a similar but more serious psychopathology than the latter.

T5-07-3

Discriminative temperamental and emotion regulation traits for eating disorder in teenage girls with major depression and comorbid eating disorder

Kapornai, Krisztina¹; Papp, Szilvia²; Dochnal, Roberta²; Skultéi, Dóra²; Kovacs, Maria²; Vetro, Agnes²

¹University of Szeged, Child and Adolescent Psychiatry, Hungary;

²University of Szeged, Hungary; ³University of Pittsburgh, USA

Background, aim(s): To improve our knowledge about the development of eating disorders, we investigated early developmental and psychosocial factors along with temperament and emotion regulation (ER) characteristics in a sample of teenage girls with comorbid major depression (MDD) and eating disorder. Specifically, to explore whether there is any developmental or familial risk factor is specific for eating disorder, we compared our comorbid sample to their peers with MDD only and to community controls.

Materials/methods: 14 patients with MDD and eating disorder (mean age 13,14 \pm 2,45 years) were compared to 70 patients with MDD (mean age 13,10 \pm 2,29 years) and 70 controls (mean age 13,63 \pm 1,23 years). Patients were evaluated by a DSM-IV based diagnostic assessment, including the General Information Sheet (GIS), a structured parent interview focusing on developmental/familial history. In case of controls we used the self-rating version of GIS. The patients' temperament was evaluated by using the parent version of EAS Temperament Survey, while to test the ER characteristics of our patients we used the self-rated "Feelings and Me" questionnaire.

Results: Girls with eating disorder are significantly differed from controls regarding early sleeping problems ($p = 0.042$), soothability ($p = 0.003$) and familial discord ($p = 0.005$), however there was no significant difference between the comorbid and MDD groups regarding the developmental/familial factors. Girls with eating disorders are using significantly more negative emotion regulation strategies than doing the girls with MDD only. Girls with eating disorders were rated significantly ($p = 0.002$) higher on emotionality scale by their parents than girls with MDD.

Conclusions: Present study demonstrates the importance of the early difficult temperament in childhood psychopathology and serves some evidence about the role of negative affectivity and negative ER strategies in the development of eating disorders.

T5-07-4

Instilling hope: supporting fathers of young people affected by eating disorders

Salmin, Ivan; Harris, Chris; Murray, Peter

Princess Margaret Hospital/Eating Disorders Program, Psychological Medicine, Australia

Anorexia nervosa is a debilitating chronic condition that has a profound impact on the affected person and their whole support system. This is particularly true when the diagnosed person is a child. The whole family system is shaken by the eating disorder (ED). The impact is revealed in many different ways creating a significant amount of confusion for the parents regarding their roles and responsibilities, threatening parents' beliefs in their ability to parent, leading to the experience of a range of emotions from hopelessness to despair. Within this context, an increase in parents' understanding of the disorder would have a direct impact on their level of support of their child's treatment process. Although family therapy has long been recognised as a treatment of choice in adolescent ED there are other ways to engage families in the therapeutic process. For the past 4 years Princess Margaret Hospital Eating Disorders Program (Western Australia) has run Fathers' Forums—regular evening meetings for the dads of the adolescents with ED. This initiative was intended to narrow an information gap that existed between the parents in affected families. Traditionally many dads remained to be the main bread winners and commonly, being unable to participate in regular day-time appointments related to their child's treatment, they fell behind with important knowledge of their child's condition. The past experience has demonstrated that the fathers' regular participation in Forums has (1) contributed greatly in assisting dads in developing a greater insight into their child's condition; (2) facilitated a greater connection between the parents and their child, and between the family and the treating team, built stronger confidence in the treatment approach; (3) provided greater hope regarding the treatment outcome and their child's overall future wellbeing. This paper will describe the development, content, and evaluation of the Fathers' Forum run at PMH ED Program.

T5-08-1 Somatic symptoms in adolescent depression as a predictor of mental health outcome. A 15 year community-based follow-up study

Bohman, Hannes

Uppsala university, Neuroscience, Sweden

Aim: This study aims to investigate the long term psychiatric health outcome in adolescents with somatic symptoms with and without depression compared with their healthy peers.

Methods: The total population of 16 to 17-year-old, in the city of Uppsala, was screened for depression 1990, and then interviewed by means of a structured interview. 22 somatic symptoms were assessed. 301 depressed subjects and 306 controls were interviewed in the baseline study. 64.1% were followed up 15 years later with diagnostic interviews. The adolescents with depression were followed up according to their numbers of somatic symptoms.

Results: Somatic symptoms with and without depression predicted adult mental disorders. There was a dose response relationship between the number somatic symptoms in adolescent depression and adverse adult mental health outcome. Those who had experienced more than 4 symptoms, representing 22% of the depressed adolescents, had considerable problems with chronic depression, recurrent depression, bipolar disorder, psychotic disorders, suicidal behavior and personality disorder at follow up. DSM-IV depression criteria did not better predict adult psychiatric health outcome than specific concurrent somatic symptoms, nor did the duration of adolescent depression.

Conclusion: This study demonstrates that somatic symptoms in adolescence over time predict mental health problems. Multiple somatic

symptoms concurrent with adolescent depression are strongly linked to poor adult mental health outcome. Adequate treatment guidelines are missing for this group of depressed patients with somatic symptoms.

T5-08-3 Bipolar disorder in children and adolescents: clinical and research controversies

Milavic, Gordana

South London and Maudsley NHS Foundation Trust, National and Specialist Services, UK

Bipolar disorder (BPD) in young people is a serious psychiatric condition with a lifetime prevalence of 1% [1]. Epidemiological studies demonstrate that 60% of adults report developing syndromal symptoms of mania in adolescence indicating that the prevalence rates of BPD in young people are much higher than those currently being identified [2]. The identification, recognition and diagnosis of BPD in children and young people pose specific challenges, the main questions being whether short episodes qualify for a diagnosis of BPD and the validity of the BP NOS diagnosis [3]. The role of episodic irritability is controversial with persisting differences between the ICD and DSM IV. This presentation will focus on the assessment and treatment of BPD; when it is reasonable to consider a diagnosis of bipolar disorder in children and adolescents and what makes the course of bipolar disorder in this age group different to that diagnosed in adults. Medication algorithms will be referred to including treatment of depression in high risk populations [4]. A brief overview of the BPD specific multi-family psycho-education groups, family therapy, interpersonal and social rhythm therapy, dialectic behavioural therapy and a range of cognitive behavioural therapies will be provided [4].

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T5-08-4 Parent-child interactions as a predictor for headache remission and development of emotional problems – 8 years follow-up study

Siniatchkin, Michael¹; Gerber, Wolf-Dieter²

¹Christian-Albrechts-University of Kiel, Clinic for Child and Adolescent Psychiatry, Germany; ²Christian-Albrechts-University of Kiel, Germany

Objectives: Dysfunctional parent–child interactions may cause a number of child psychiatric disorders and are often observed in families with children presenting with several psychosomatic symptoms such as headache and stomachache. This study investigates whether parent–child interactions may predict the clinical course of psychosomatic disorders, development of internalizing behavioral problems and neuronal stress reactivity.

Methods: In the year 1998, 31 children suffering from migraine without aura and 21 healthy children were investigated using video recordings of parent–child interactions in a standard situation (puzzle). The expression of control, emotional criticism and reinforcement were assessed by three raters (inter-rater reliability >0.8). In the year 2006, the patients and healthy subjects were reinvestigated using a prospective headache diary and Beck Depression Inventory (BDI). The neuronal stress reactivity was studied using recordings of the contingent negative variation (CNV) – an event-related slow cortical potential – in rest and during a stressful problem-solving task.

Results: The best predictor for headache remission was the positive change of parent–child interactions over time (less control/criticism and less parental restrictive behavior, $B = -1.49$; $\text{Beta} = 0.556$, $t = -2.68$; $p < 0.013$). The development of internalizing problems after 8 years follow-up was well predicted by the expression of criticism during parent–child interactions in the year 1998 ($B = 241.8$; $\text{Beta} = 0.828$; $t = 10.1$; $p < 0.001$). Subjects with more parental criticism in the year 1998 were characterized by more reactivity of the CNV on stress in the year 2006 ($p = 0.03$).

Conclusion: Parental criticism towards a child seems to represent an important factor which may explain development of emotional disorders and increased stress reactivity over time. However, positive changes in parent–child interactions may cause substantial improvement of the clinical course of psychosomatic symptoms.

T5-08-5

Temperament and character traits in children and adolescents with major depressive disorder: a case-control study

Zappitelli, Marcelo C.¹; Bordin, Isabel A.²; Hatch, John P.³; Caetano, Sheila C.⁴; Zunta-Soares, Giovana⁵; Olvera, Rene L.³; Soares, Jair C.⁵

¹Universidade Federal de São Paulo, Department of Psychiatry, Brazil; ²Universidade Federal de São Paulo, Brazil; ³The University of Texas Health Science Center at San Antonio, San Antonio, TX, USA, USA; ⁴Universidade de São Paulo, Brazil; ⁵University of Texas Health Science Center at Houston, Houston TX, USA, USA

Objectives: To evaluate temperament and character traits using the Junior Temperament and Character Inventory (JTICI) in children and adolescents with major depressive disorder (MDD) in comparison with healthy control subjects (HC), and to verify if comorbidity with disruptive disorders and being currently depressed influence JTICI scores.

Methods: A case–control study comprising 41 MDD children/adolescents matched to 40 HC by gender and age (8–17 years). All participants were assessed diagnostically with the Kiddie Schedule for Affective Disorders and Schizophrenia—Present and Lifetime (K-SADS-PL). Temperament and character traits were measured with the parent and child versions of JTICI, and depression was evaluated with the Children’s Depression Rating Scale (CDRS)

Results: MDD subjects had significantly higher scores on harm avoidance and novelty seeking, and lower scores on reward dependence, persistence, self-directedness and cooperativeness compared with HC. Comorbidity with disruptive disorders exerts influence on

almost all dimensions, in general increasing the mean differences between MDD and HC subjects. Also, being currently depressed did not influence the results, except for RD according to parent data.

Conclusions: MDD children/adolescents have a different temperament and character profile compared to HC subjects. This study supports previous findings of trait-like characteristics of harm avoidance and self-directedness.

T5-08-6

Co-twin dependence and mental-health

Trias, Tuulikki¹; Ebeling, Hanna²; Moilanen, Irma²

¹Fundació Orienta, Child Psychiatry, Spain; ²University of Oulu, Child Psychiatry, Finland

Objective: To investigate mental well being of adult twins (34–42 years of age) in relation to co-twin dependence.

Methods: The sample consisted of 305 twins, born in 1965–1973, from Northern Finland who had been followed from pregnancy at 10-year intervals, at 2–10, 12–20, 22–30 and at 34–42 years of age. Data on inter-twin relationships and psychosomatic symptoms were assessed, and twins completed the Beck Depression Inventory.

Results: MZ twins, especially MZ females, reported most often co-twin dependence. When the co-twin dependence was evaluated in relation to symptom reporting, dependent twins reported more total depressiveness, negative attitude towards self, performance impairment and somatic symptoms than the independent ones. Depressive and psychosomatic symptoms in relation to co-twin dependence were evaluated separately in SS and OS twin pairs. Dependent SS males reported significantly more total depressiveness negative attitude towards self and somatic symptoms than independent SS male twins. Males who were dependent on their twin sister (OS males) scored higher in total depressiveness, showed more negative attitude toward self and more somatic symptoms than independent ones. Dependence–independence imbalance within twin pair was associated with elevated levels of symptom reporting, especially in twins who perceived themselves as dependent and the co-twin as independent.

Conclusions: Co-twin dependence was associated with symptom reporting as dependent twins reported more total depressiveness, negative attitude towards self, performance impairment and somatic symptoms than the independent ones. Twin’s subjective experience about the co-twin dependence appeared to be important for the twin’s mental well-being as dependence–independence imbalance within twin pair was associated with elevated levels of depressive symptom reporting, especially in twins who perceived themselves as dependent and the co-twin as independent.

T5-09-1

Leisure time activities and behavioral/emotional problems in adolescents with mild cognitive limitations

Heikura, Ulla¹; Ebeling, Hanna²; Rodriguez, Alina³; Nordström, Tanja¹; Taanila, Anja¹

¹University of Oulu, Institute of Health Sciences, Finland; ²University and University Hospital of Oulu, Clinic of Child Psychiatry, Finland; ³Uppsala University, Department of Psychology, Sweden

Aim: Adolescents having mild cognitive limitations (MCL, intelligence quotient, IQ 50–85) are in higher risk for having mental

disorders and for marginalization compared with adolescents having intelligence within normal range. There is a lack of epidemiological studies on life style and mental disorders affecting adolescents with MCL. Our aim is to study leisure time activities and behavioral/emotional problems in adolescents with MCL by having adolescents of normal range intelligence (IQ above 85) as a reference group

Methods: The Northern Finland Birth Cohort 1986 included 9,432 live born children. In an 11.5 year follow-up the children's intellectual level was studied by intelligence tests collected from multiple sources. Data were collected from the questionnaire sent to the adolescents at age of 15–16 years. The questionnaire was comprised of questions on current life situation, health and leisure time activities and also of Youth Self-Report. 7,344 adolescents (80%) responded the questionnaire and 144 of them had MCL.

Results: Preliminary results showed that between the adolescents with and without MCL there was no difference in satisfaction with the current life situation and self-reported health. However, adolescents with MCL had more often none or only one close friend (46 vs. 31%). They met their friends more seldom, spent less time by listening music, reading or having physical activity and they went more rarely to cinema or exhibitions. In addition, they were more often affected by withdrawn/depressed problems (scores 3.61 vs. 2.87, $p = 0.002$) and social problems (scores 3.26 vs. 2.09, $p < 0.001$).

Conclusions: Adolescents with MCL spend their leisure time on more passive ways and they have fewer close friends than their counterparts not having MCL. They experience more often withdrawn/depressive as well as social problems. Intervention aimed to enhance wellbeing of adolescents with MCL should be targeted on improving social skills.

T5-09-2

Quality of life in adolescents and young adults 6 years after paediatric referral for unexplained chronic pain

Knook, Lidewij¹; Lijmer, Jeroen²; Konijnenberg, Antoinette³; Hordijk, Patricia⁴; van Engeland, Herman⁴

¹University Medical Centre Utrecht, Child and Adolescent Psychiatry, The Netherlands; ²OLVG Amsterdam, Department of Psychiatry and Medical Psychology, The Netherlands;

³University Medical Centre Utrecht, Dept. of Paediatric Nephrology, The Netherlands; ⁴University Medical Centre Utrecht, The Netherlands

Background: Chronic pain and comorbid psychiatric symptoms often persist when children referred for unexplained chronic pain (UCP) grow older, but its impact on daily functioning is yet unknown.

Aims: This study examined Health Related Quality of Life (HR-QoL) and school and work attendance of youths, 6 years after their referral for UCP to a university outpatient clinic.

Materials and methods: Participants were 99 children and adolescents; aged 8 till 15 who filled out standardized questionnaires and who were psychiatrically interviewed between 2000 and 2002. They were reassessed after a minimum of 5-years follow-up, aged 13 till 24. Previous analyses revealed substantial baseline impairment and high prevalence of persistent chronic pain (74%) and comorbid psychiatric disorders (32%) in this sample. Outcome measures were Health Related Quality of Life (SF-36), and pain-related school/work absence.

Results: Compared to the general population, outcome was significantly worse in 2 out of 8 SF36 dimensions; Bodily Pain ($p = 0.001$ males, $p = 0.000$ females) and General Health (females, $p = 0.001$). Persistent unexplained chronic pain, but not psychiatric comorbidity, was significantly associated with Bodily Pain ($\hat{a} = -30.4$, 95% CI -39.59 to 21.29 , $p = 0.000$), and female General Health ($\hat{a} = -17.8$, 95% CI -28.10 to 7.52 , $p = 0.001$). The school/work attendance of all participants improved significantly ($p = 0.002$) compared to baseline. In this sample 49 out of 53 adults (92%) completed secondary education.

Conclusions: Six years after paediatric referral for unexplained chronic pain, youth reported more pain than their peers, and female youth had poorer health beliefs. Affected HR-QoL dimensions were not related to psychiatric comorbidity, but merely to persistence of pain. Well-being, vitality, social, emotional, and physical functioning were comparable to peers, and persisting symptoms did not seem to influence school and occupational careers, suggesting successful adaptation.

T5-09-3

Children of alcoholics and non-alcoholics: a comparative analysis of quality of life and study habits

Stanley, Selwyn¹; P. Rajan, Aswaty²

¹University of Plymouth, Social Work, UK; ²Social Worker, India

Aims: Studies indicate that children of alcoholics are at increased risk for a variety of negative outcomes such as anxiety disorders, low self-esteem, difficulties in family relationships, and generalized distress and maladjustment. Besides, they constitute a population at-risk for poor academic performance, school absenteeism and drop out. This study was done to assess and compare the nature of study habits and QOL of children from families having an alcoholic parent with children of non-alcoholic parents and to determine the extent of correlation between their QOL and study habit dimensions.

Methods: Fifty children of alcoholics were contacted at a de-addiction center in Tiruchy, India, where their father was registered for in-patient treatment. A group of children of non-alcoholic parents, identified from the community and matched on age, family income and ordinal position served as the reference group. The Study Habit Inventory (Patel 1976) which assesses seven dimensions (home environment and planning, reading and note taking, subject planning, concentration, exam preparation, school environment and general habits) was administered along with the Perceived QOL scale by Patrick and Davis (1988) which assesses QOL on social, physical and cognitive dimensions.

Results: The results indicate that children of alcoholics showed a statistically significant difference from the control group on the overall QOL score and all its components. Further, their study habits were poorer than the control group subjects particularly with regard to their home and school environment, concentration, preparation for examination and general habits and attitudes. **Conclusions:** It is concluded that parental alcoholism results in a poor QOL in children and adversely impacts their academic habits. The finding is in consonance with the stress perspective of alcoholism which contends that the stress of living with an alcoholic can have adverse consequences for other family members.

T5-09-4**Comparative study of quality of life for children with ADHD and children with diabetes mellitus**

Panaete, Alina¹; Patca, Sanda¹; Andreica, Bianca²; Andreica, Mariana²

¹SCUC Cluj, Romania; ²UMF Iuliu Hatieganu, Cluj-Napoca, Romania

The term “quality of life related to health” includes the areas of physical, mental and social health, seen as distinct areas influenced by experiences, beliefs, expectations and personal perceptions. The aim of this comparative study is to assess the quality of life for children with diabetes and those with ADHD and to compare how it affects different areas of activity (psychological, social, school). The study was done on children of school age, diagnosed with ADHD in Pediatric Psychiatry Clinic and children diagnosed with DZ in Pediatric Clinic II, Cluj-Napoca. The two lots are similar in terms of age and sex ratio, and the children have no other diagnosis except for the selection criterion of the two groups. For the evaluation we used a unique questionnaire obtained by combining questions contained in Child Health and Illness Profile-Child Edition/Child Report Form (CHIP-CE/CRF) and Diabetes Quality of Life Clinical Trial Questionnaire (DQLCTQ), aiming at the threshold of tolerance discomfort, psychological and social status (school, the daily functioning and interpersonal relationships). The questions assess the degree of mal-function in these domains. Chronic somatic or mental disease is radically changing patients’ life. They must cope with the following changes: physical disability caused by disease, relationships with others, negative emotions, routines related to medication, side effects of medication. Chronic diseases affect the patient in different ways, starting with the extra efforts to make necessary adjustments to the medical condition, to managing emotions like anxiety and depression, which accompany the disease. To self-define the quality of life is increasingly important because the outcome of any treatment, even if it can be measured objectively, has as the most relevant benefit an increase of the autonomy degree and an enhancement of the range of options regarding the daily activities and improve patient self image.

T5-10-1**Specificity and severity of pre-psychotic juvenile behavior and cognition. A follow-up study of a large cohort of children into adulthood**

Fagel, Selene¹; de Sonnevill, Leo²; van Engeland, Herman³; Swaab, Hanna²

¹University of Leiden, Clinical Child and Adolescent Studies, The Netherlands; ²Leiden University, Clinical Child and Adolescent Studies, The Netherlands; ³Utrecht University, Child and Adolescent Psychiatry, The Netherlands

Psychosis is generally considered a disorder of early adulthood, but the pathological processes predisposing psychosis may already be present earlier in life. What we will discuss in this issue are the results from a longitudinal follow-up study of psychosis of a large cohort of psychiatrically assessed children at the Department of Child and Adolescent Psychiatry in Utrecht, The Netherlands, between 1984 and 2004 who are now on adult age. In comparison with the majority of studies comparing normal subjects with (pre)psychotic subjects, this

cohort only includes children who show all kinds of juvenile behavioral, emotional and social pathological abnormalities. This will allow us to address the question of specificity of pre-psychotic behavioral and cognitive abnormalities. Both specificity for psychosis of pre-psychotic behavioral abnormalities by means of juvenile DSM diagnosis and CBCL subscales, as well as age and sex-related risk and cognitive abnormalities for psychosis are discussed. Results revealed an extreme high prevalence of psychosis within this cohort. This emphasizes the developmental dynamics and the general elevated vulnerability for psychosis of this juvenile psychiatric cohort. Besides this overall high risk for psychosis, some juvenile psychiatric disorders were actually more at risk than others. Further, distinction in gender and age of assessment (childhood vs. adolescence) and their prevalence for psychosis revealed different developmental pathways. Results derived from the CBCL total and subscale scores have delineated meaningful sex- and age specific pathways to psychosis. To end with, the current results show that pre-psychotic subjects are disturbed on Perforal IQ when compared to their non-psychotic psychiatric counterparts. More specifically, they demonstrate deficits in Kaufmans Freedom from Distractibility and in Visual Perceptual Organization.

T5-10-2**Longitudinal brain changes in adolescents at risk for psychosis**

Ziermans, Tim¹; Schothorst, Patricia²; Schnack, Hugo³; Magnee, Maurice³; Kahn, Rene²; van Engeland, Herman³; Kemner, Chantal³; durston, Sarah³

¹Karolinska Institute, Sweden; ²University of Utrecht, Child and Adolescent Psychiatry, The Netherlands; ³University of Utrecht, The Netherlands

Ultra-high risk for psychosis has been associated with multiple longitudinal changes in brain structure and function in young adults. The onset of these changes and their subsequent progression over time are not well understood. In two separate studies, brain changes over time were investigated in a large group of adolescents at ultra-high risk for psychosis compared to typically developing adolescents. Structural brain measures and prepulse inhibition (PPI) of the auditory startle reflex were measured at baseline and at two-year follow-up. Results were compared between UHR individuals and controls and post-hoc analyses were conducted for UHR individuals who became psychotic (UHR-P) and those who did not (UHR-NP). UHR individuals showed a smaller increase in cerebral white matter over time than controls. Additionally, post-hoc analyses showed that UHR-P individuals had a more pronounced decrease in total brain and white matter volume relative to controls and a greater decrease in total brain volume than UHR-NP individuals. Furthermore, UHR-P individuals displayed more thinning than controls in widespread areas in the left anterior cingulate, precuneus and the speech area. Observations of PPI showed there was reduced PPI over time in UHR individuals and that clinical improvement was associated with an increase in PPI parameters. UHR-P individuals did not deviate from UHR-NP individuals on PPI. Brain changes in UHR individuals were unlikely to be caused by use of (antipsychotic) medication. The development of psychosis during adolescence is associated with progressive structural brain changes and altered attentional processing around the time of onset. These changes cannot be attributed to (antipsychotic) medication use and as such reflect pathophysiological brain changes related to the clinical manifestation of psychosis.

T5-10-3

Deficits in executive functioning in adolescents with autism spectrum disorder: predicting psychosis?

*Barneveld, Petra*¹; *de Sonneville, Leo*²; *Pieterse, Jolijn*²; *van Rijn, Sophie*²; *Lahuis, Bertine*³; *Pieterse, Jolijn*²; *van Engeland, Herman*³; *Swaab, Hanna*²

¹Leiden University, Clinical Child and Adolescent Studies, The Netherlands; ²Leiden University, The Netherlands; ³Utrecht University, The Netherlands

Impairments in executive function (EF) endorse aberrant neurodevelopment in autism spectrum disorder (ASD) and schizophrenia spectrum disorders (SSD). Studies comparing symptoms of ASD and SSD as well as diagnostic criteria (DSM-IV-TR) suggest resemblances in the clinical phenotype. This study contributes to scientific literature by examining if specific deficits in EF correspond to dimensions of autism and schizotypal symptomatology to identify vulnerability markers for SSD pathology in adolescents with ASD diagnosed in childhood. A group of 40 adolescents diagnosed with ASD in childhood (10–18 years) and 40 typically developing adolescents participated in this study. Neurocognitive tasks (Sustained attention, Visual set shifting, Tracking and Pursuit of the Amsterdam Neuropsychological Tasks and the Wisconsin Card Sorting Test) were used to assess inhibition, mental flexibility, visuo-motor control, attentional control and perseveration from the EF domain. The Autism Questionnaire and Schizotypal Personality Questionnaire-Revised) were used to identify specific autistic and schizotypal traits. In summary, results revealed EF problems in adolescents with ASD and they also demonstrated substantial levels of schizophrenia spectrum traits within the ASD population. The overlap of autistic and schizotypal symptoms is not limited to negative symptoms, but extends to disorganized and positive symptoms as well. Impaired response inhibition appeared to be strongly associated with schizotypal traits, specifically with positive and disorganized symptoms, indicating that deficits in response inhibition might be one of the underlying cognitive mechanisms contributing to these SSD symptoms in adolescents diagnosed with ASD earlier in life. In conclusion, inhibition problems might indicate vulnerability for schizotypal symptomatology in ASD.

T5-10-4

Social cognition in adolescents at risk for psychosis

*van Rijn, Sophie*¹; *Aleman, Andre*²; *de Sonneville, Leo*³; *Sprong, Mirjam*³; *Ziermans, Tim*⁵; *Schothorst, Patricia*⁴; *van Engeland, Herman*⁴; *Swaab, Hanna*⁶

¹Leiden University, Clinical Child and Adolescent Studies, The Netherlands; ²University of Groningen, The Netherlands; ³University of Leiden, The Netherlands; ⁴Utrecht University, The Netherlands; ⁵Karolinska Institute, Sweden; ⁶Leiden University, The Netherlands

By studying behaviour, cognitive abilities and brain functioning in adolescents at high risk for psychosis, one may gain insight in vulnerability markers or protective factors in the development of psychotic symptoms. Although many high risk studies have focused on impairments in neurocognitive functions, such as memory and attention, very few studies have investigated problems in

processing social cues such as facial expressions as a possible vulnerability marker for psychosis. Thirty-six adolescents at ultra high risk (UHR) for psychosis and twenty-one non-clinical controls completed a face recognition test, a facial affect labeling test and an inhibitory control test. Schizotypal traits and schizophrenia symptoms were assessed using a schizotypy questionnaire and the PANSS. The UHR group showed impairments in labeling facial expressions of others, in the face of a spared ability to recognize facial identity. More specifically, they made more errors in labeling neutral expressions and analysis of error types indicated that neutral faces were misattributed as being angry. The degree of misattribution of neutral-as-angry faces was significantly correlated with reduced inhibitory control. Present findings suggest that misattributing social cues might contribute to vulnerability for psychosis. This social cognitive deficit may be related to problems in inhibitory control, which potentially plays an important role in selection of appropriate social meaning. Our findings may have relevance to understanding mechanisms underlying prodromal social dysfunction, which may be targeted in future remediation interventions.

T5-10-5

The effects of an extra X chromosome on developmental psychopathology

*Bruining, Hilgo*¹; *van Rijn, Sophie*²; *Swaab, Hanna*²; *Giltay, Jacques*³; *Kates, Wendy*⁴; *Kas, Martien*³; *van Engeland, Herman*³; *de Sonneville, Leo*²

¹Utrecht University, Child and Adolescent Psychiatry, The Netherlands; ²Leiden University, The Netherlands; ³Utrecht University, The Netherlands; ⁴Medical University New York, USA

Klinefelter syndrome is (47, XXY; 1:700) is associated with variable cognitive deficits, language problems and social dysfunction. In adults, an increased prevalence of psychotic morbidity in KS has been acknowledged. The consequences of an extra X chromosome on behavioral development have been under evaluated. Fifty-one boys with KS ages 6–19 years were screened using standardized assessment procedures covering the full range of psychiatric symptoms and disorders. Autistic trait variables were entered in statistical analyses to assess differences in symptom homogeneity and to assess the specificity of pervasive symptom profiles in KS. Parent-of-origin of the extra X chromosome was determined in order to test whether the parent-of-origin influences autistic and schizotypal symptom profiles in KS. A wide range of classifications could be applied with language disorder (65%, 33/51) as the most prevalent disorder, followed by attention deficit disorders (63%, 32/51) and autism spectrum disorder (27%, 14/51) and psychosis (12%, 6/51). A robust discrimination between pervasive symptom profiles in autistic subjects with KS and autistic subjects without KS was feasible. Differences were also shown in the degree of both schizotypal and autistic symptoms between the parent-of-origin groups within the KS sample. KS children are at risk for particular problems in social development with an increased risk for both autism and psychosis. The profile of pervasive developmental symptoms in KS subjects reflects a more precise genotype-phenotype relationship than can be established for the general population. Furthermore, parent-of-origin effects on psychopathology in KS seem to exist and indicate that imprinted X chromosomal genes may have differential effects on autistic and schizotypal symptom profiles. These studies indicate that KS is a powerful model to study different X chromosomal influences on behavioral outcome especially with regards to autism and psychosis.

T5-10-S Vulnerability for psychosis in childhood and adolescence (Symposium)

*Swaab, Hanna*¹; *van Engeland, Herman*²

¹University of Leiden, department of child and adolescent studies, The Netherlands; ²University of Utrecht, Rudolf Magnus Institute of Neuroscience, Child and Adolescent Psychiatry, The Netherlands

Early detection of vulnerability markers and protective factors for psychosis is relevant for understanding developmental mechanisms. Results will be presented of different studies that addressed questions concerning developmental vulnerability in behavior, cognitive abilities, brain functioning and genetics in children and adolescents at high risk for psychosis: (1) A follow-up study into adulthood of 6,700 child-psychiatric patients revealed a high risk for psychosis. Specificity for psychosis of pre-psychotic behavioral abnormalities as well as age and sex-related risk and cognitive abnormalities for psychosis will be discussed. (2) Brain changes over time were investigated in a group of adolescents at ultra-high risk for psychosis. Psychotic individuals showed more pronounced decrease in total brain and white matter volume compared to controls and to not psychotic individuals. (3) The relevance of deficits in attention and EF as underlying cognitive mechanisms that contribute to behavioral autism spectrum and schizophrenia spectrum pathology in adolescents with ASD was evaluated. Behavioral overlap of autistic and schizotypal symptoms was found. Inhibition problems indicate vulnerability for development of schizotypal symptomatology in autism. (4) Ultra high risk adolescents showed impairments in labeling facial expressions. Misattributing social cues may be related to problems in inhibitory control, which potentially plays an important role in selection of appropriate social meaning. (5) In a group of boys with Klinefelter syndrome a specific profile of autistic symptoms was found. Parent of origin of the extra X chromosome appeared to be associated with severity of problems. Findings indicate that KS is a powerful model to study X chromosomal influences on behavioral outcome especially with regards to autism and psychosis.

T5-11-1 Post-traumatic stress symptoms among the school personnel

Lyytinen, Nina

Helsingin lääkärikeskus, Finland

Objectives: School personnel who are exposed to school violence are at risk in developing post traumatic stress disorder (PTSD). The aim of the present study was to examine the presence and change in PTSD symptoms during the first year after the Jokela school shooting, and how the initial exposure and treatment affected the symptoms.

Methods: A sample of 24 members of Jokela school personnel were examined 4 months after the incident and 16 were reassessed 11 month after the incident. To study the change and level of symptoms in other schools during the same period, a group with no exposure to the shooting was used as a control group ($n = 22$). The assessment included Post Traumatic Stress Disorder Checklist Specific (PCL-S) and a social and professional support questionnaire. In addition questions about timing of support and experiences of psychological debriefing were asked.

Results and conclusions: Most participants in the study group experienced some symptoms of PTSD at both 4 and 11 months. In

both measures three participants from the study group fulfilled the diagnostic criteria for PTSD. The study group and control group differed significantly in overall symptom levels. The study group had more PTSD symptoms in the first measure but in the follow-up the study group's PTSD symptoms decreased and the control group's increased. There was a significant change in the study groups PTSD symptom level for those who started treatment right after the traumatic event. The results from this study showed that an exposure to school shooting has long-term effects on school personnel. The findings suggest that it is crucial to plan a comprehensive and long-term treatment for school personnel in the aftermath of school shooting.

T5-11-2 Professional acute and long term psychosocial support among school shooting trauma exposed students in Kauhajoki, Finland

Turunen, Tuija

Hospital District of South Ostrobothnia, Finland

Background: The immediate psychosocial support for the students exposed to trauma was offered by the local health care professionals with the help of the professionals and experts from the region. Acute and long-term aftercare was coordinated by the special Kauhajoki-project for 2 years. Kauhajoki-project was a multi-operator, multi-disciplinary and multiprofessional project managed by the Hospital District of South Ostrobothnia (<http://www.kauhajokihanke.fi>).

Implementation: The psychosocial interventions and their timing were based on national and international recommendations, research findings and the Finnish knowledge of crisis interventions. The experiences of the aftercare offered in Jokela were further developed in Kauhajoki. The aftercare was linked to the school community's everyday life so that the services offered were as easy to reach as possible. The phases of the aftercare process followed the natural trauma-recovery process. The interventions used were tailored to the special and individual needs of the exposed students and the school community. The immediate support phase consisted of the psychosocial support offered to the victims within the first 24 h. The acute phase lasted for the first 2 weeks and was followed by a 5-month period of empowerment and normalization. The habituation phase started as the renovation of the damaged building was reaching completion. During the first anniversary phase reactions raised by the upcoming anniversary were dealt with. The last phase, the follow-up phase began at the first anniversary and lasted to the end of the organized after-care process.

Conclusions: The organized, intensive aftercare lasted for 2 years. Responsibility for the ongoing psychosocial support was gradually transferred to the local services. The impact of the tragedy will still be felt for years to come and the local authorities should be aware and educated for recognizing any possible late trauma related symptoms.

T5-11-3 Psychologists at the school

*Taijonlahti, Tiina*¹; *Tupeli, Karita*²

¹Health Care Center of Kauhava, Finland; ²Hospital District of South Ostrobothnia, Finland

Psychologists at the school: The aim was to ensure the coping of the students and staff in a crisis and provide comprehensive psycho-social support. The psychologists collaborated with other helpers and the school staff. Students and staff were given immediate individual and group support. Teachers were supported first. Then they were able to help their students. The psychological expertise was given to parents and community-level, too. Help was actively offered. The need for support was assessed through interviews and IES-questionnaires. Student welfare groups were carried out. Short discussions and clinical supervision with the staff were held at the school. The EMDR technique and other trauma therapy treatments were used, working at body level too. The after-care was carried out by psychologists recruited from other towns. Flexibility of the psychological work was held in mind. A psychological operating method was created in Jokela and further developed in Kauhajoki.

T5-11-S

After the school shootings-Finnish responses to the need of support

*Palosaari, Eija¹; Lyytinen, Nina²; Turunen, Tuija³;
Tajonlahti, Tiina⁴; Tupeli, Karita³*

¹Private practitioner, Finland; ²Helsingin lääkärikeskus, Finland;
³Hospital District of South Ostrobothnia, Finland; ⁴Health Care
Center of Kauhava, Finland

The school shootings in Jokela (2007) and Kauhajoki (2008) demonstrated a sequence of two exceptional massacres in Finland. This created a need for a large-scale support. After the school shootings, the state authorities provided organized, professional support by financial resources. It was integrated into standard services and lasted about 2 years. The psychosocial work played a significant role and showed that there is need to develop professional practices, too. The after-care is estimated to continue in local services at least two more years. The psychosocial support in the acute phase followed the principles of Finnish model of crisis work in which we have about 20 years of experience. After-care planning commences immediately and is interlaced with crisis help in the acute phase. The symposium deals mostly with the after-care phase following the acute crisis work. The presenters are psychologists who have taken part in the acute phase and continued to the after-care of the school shootings. They also have wide experience in planning, fieldwork and research of above. One presentation clarify the research data concerning teachers in Jokela, one the professional acute and long term psychosocial support among students in Kauhajoki. The other two handle psychological after-care in Jokela and Kauhajoki.

W1-01-PL

Family functioning in the context of infant psychopathology

Keren, Miri

Geah Mental Health Center, Tel Aviv University Medical school,
Infant Mental Health Unit, Israel

The family context provides an important setting for the infant's social-emotional growth and well-being. Among families at high risk

family functioning has been described as less involved, distant, and less efficacious. Yet, family-level assessments have typically not been included in general clinical practice nor have they informed policies of infant care. Given the extensive research pointing to the infant's capacity to detect family relationships and to the importance of the family-level process for child's self-regulation and peers relationships we expected to find that infant psychopathology reflects maladaptive functioning at the family level, as well as at the dyadic level and that interrelationship exist between the individual, dyadic, and family-level functioning. We compared infants and parents referred to our infant mental health clinic, with non-referred triads, and found a significant link between infant psychiatric symptoms and family functioning, suggesting that infant symptomatology reflects a problematic context at the dyadic as well as at the family level. Our findings also point to a link between infant and maternal symptomatology and family functioning, especially with regard to maternal depression and anxiety. We suggest that routine assessment and intervention in infant mental health units should include the family-level as well as the dyadic level of interactions, especially when the infant's symptomatology is accompanied by maternal psychiatric symptoms and intrusive interactive style. We suggest to add a Family Axis to the DC 0-3R classification system. A further step would be to better conceptualize triadic psychotherapies, as, in contrast with the extensive development of dyadic parent-infant psychotherapies, significantly less attention has been paid to mother-father-infant psychotherapies.

W2-01-1

Facial affect recognition in Autism Spectrum disorder, Attention Deficit Hyperactivity Disorder and typically developed children in Egypt

*ElSheikh, Sherin¹; Moilanen, Irma²; Omar, Manal³; Riad, Geylan¹;
Jussila, Katja²; Kuusikko-Gauffin, Sanna²; Mattila, Marja-Leena²;
Ebeling, Hanna²*

¹Abbassia Mental Hospital, Child Psychiatry Unit, EGYPT; ²Institute of Clinical Medicine, University and University Hospital of Oulu, Department of Child Psychiatry, Finland; ³Institute of Childhood Research, Ain Shams University, Egypt

Background: Interpersonal relationship impairment in Autism Spectrum Disorder (ASD) is a result of failure to understand others' thoughts and emotions. Recent studies suggest impairment in affect recognition in Attention Deficit Hyperactivity Disorder (ADHD) as well as in ASD.

Aim: To assess the facial affect recognition in ADHD, ASD and typically developed (TD) children in Egypt.

Materials and Methods: Study groups included 34 ASD children (age, mean \pm SD, 8.49 ± 2.36 ; $IQ \geq 70$) and 36 ADHD children (age, 9.87 ± 1.56 ; $IQ \geq 90$) recruited from a tertiary-referral hospital and a private clinic in Cairo. Control group included 34 randomly selected school children (age, 10.23 ± 2.4). ADI-R, ADOS and Kiddie-SADs were used. Facial affect recognition was assessed using a computer based program (The Frankfurt Test and Training of Facial Affect Recognition).

Results and Conclusion: Statistical significant difference was found between ADHD and ASD in anger scale (mean: 48.82 ± 21.42 vs. 61.67 ± 16.30 ; $p = 0.007$), surprise scale (21.08 ± 24.03 vs. 47.22 ± 27.16 ; $p = 0.000$), disgust scale (36.03 ± 33.81 vs. 52.08 ± 33.47 ; $p = 0.050$) and neutral scale (37.58 ± 23.84 vs. 56.17 ± 23.89 ; $p = 0.002$). However, there was no statistically

significant differences between the 2 study groups in happiness scale (63.24 ± 26.64 vs. 72.92 ± 16.22), sadness scale (50.00 ± 20.14 vs. 42.90 ± 17.03), and fear scale (33.99 ± 32.93 vs. 25.62 ± 29.07). Of the facial affect recognition scales, significant difference existed between TD children and ADHD children in surprise scale only (62.25 ± 25.06 vs. 47.22 ± 27.16 ; $p = 0.019$) and between TD children and ASD group in surprise scale (62.25 ± 25.06 vs. 21.08 ± 24.03 ; $p < 0.0001$), disgust scale (57.35 ± 37.19 vs. 36.03 ± 33.81 ; $p = 0.016$), and neutral scale (56.21 ± 25.06 vs. 37.58 ± 23.84 ; $p = 0.003$). Our findings imply that facial affect recognition is reduced in ASD and ADHD. Specific facial emotions could be difficult for TD children to recognize.

W2-01-2 Neuropsychological performance in families with Autism Spectrum Disorders

Kuusikko-Gauffin, Sanna¹; Jansson-Verkasalo, Eira²; Carter, Alice S³; Pollock-Wurman, Rachel⁴; Jussila, Katja¹; Mattila, Marja-Leena¹; Rahko, Jukka¹; Ebeling, Hanna¹; Moilanen, Irma¹; Pauls, David⁵

¹University and University Hospital of Oulu, Department of Child Psychiatry, Finland; ²University of Turku, Department of Behavioural Sciences and Philosophy, Finland; ³University of Massachusetts Boston, USA; ⁴Massachusetts General Hospital, Harvard Medical School, USA; ⁵Massachusetts General Hospital, Harvard Medical School, Psychiatric and Neurodevelopmental Genetics, USA

Background: Previous studies have reported deficits in face recognition and face memory (e.g., Dawson et al. 2002; Williams et al. 2005), but intact object recognition and object memory (e.g., Ghaziuddin and Mountain-Kimchi 2001; Molesworth et al. 2005) in children with Autism Spectrum Disorders (ASDs). Potential abnormalities, in these fields at the family level of high-functioning children with ASDs remains understudied despite, the ever-mounting evidence that ASDs are genetic and highly heritable disorders. Recent studies indicate also that face perception is heritability ability (e.g., Anokhin et al. 2010; Wilmer et al. 2010; Zhu et al. 2010); therefore, impairments in facial memory may be, inherited from parents with or without ASDs symptoms.

Aims: We studied 45 high-functioning children with autism (HFA) or Asperger syndrome (AS) ($M = 11.5$ years, $FSIQ > 90$) and 26 of their parents as well as 70 control community children ($M = 12.4$ years) and 73 of their parents.

Methods: Three subtests of the Developmental Neuropsychological Evaluation (NEPSY) were administered: Memory for Faces, Visual Recognition, and Visual Memory.

Results: Young HFA/AS children (<11.9-year-old) had poorer facial memory than their control counterparts. The facial memory improved with age in HFA/AS group. HFA/AS adolescents (>11.9 years) performed better than their control counterparts in visual object recognition. Furthermore, parents of HFA/AS children shared their child's deficit in facial memory ability and strength in visual object recognition.

Conclusions: HFA/AS families may benefit interventions of social cognition and attentional strategy. In the therapy, clinicians may consider to focus more on cognitions than emotions, as emotionally loaded conversation may not be immediately understood effectively by HFA/AS individuals or their parents.

W2-01-3 Neuropsychological profile of adolescents with Asperger Syndrome

Reinval, Outi¹; Voutilainen, Arja²; Korkman, Marit¹

¹University of Helsinki, Institute of Behavioural Sciences, Finland; ²Helsinki University Central Hospital, Department of Child Neurology, Finland

Objective: Although neuropsychological deficits have been reported in individuals with autistic spectrum disorders (ASD), there is a paucity of research focusing on the comprehensive neuropsychological profile indicating relative strengths and weaknesses in individuals with Asperger Syndrome (AS) during adolescence. The aim of this study was to compare the neuropsychological profile of adolescents with AS to typically developing adolescents.

Participants and Methods: Participants were 30 adolescents aged 12–16 years and diagnosed with AS and 30 adolescent control participants. The neuropsychological assessment included the WISC-III and 16 subtests of attention and executive functions, memory and learning, language, visuospatial functions, social perception and sensorimotor functions from the NEPSY-II. The control group was derived from the recent Finnish NEPSY-II standardization sample.

Results: To adjust for multiple comparisons, alpha was lowered to 0.01. Adolescents with AS had significantly higher scores than expected due to their age on Verbal-Scale Intelligence Quotient of the WISC-III ($p < 0.001$, one-sample t test). Adolescents with AS had significantly lower scores than the control group (independent samples t test) on the subtests of Auditory Attention A and B ($p < 0.01$), Memory for Faces ($p < 0.01$) and Visuomotor Precision ($p < 0.01$) of the NEPSY-II.

Conclusions: In our findings particular strengths were seen in verbal reasoning and weaknesses in auditory attention, facial recognition memory and visuomotor functions in adolescents with AS.

W2-01-4 Alexithymia among ASD children and their family members

Ebeling, Hanna¹; Wannas, Annina²; Mattila, Marja-Leena²; Hurtig, Tuula³; Kuusikko-Gauffin, Sanna²; Jussila, Katja²; Joskitt, Leena²; Joukamaa, Matti⁴; Moilanen, Irma²; Pauls, David L.⁵

¹University and University Hospital of Oulu, Institute of Clinical Medicine, Department of Child Psychiatry, Finland; ²University and University Hospital of Oulu, Finland, Institute of Clinical Medicine, Department of Child Psychiatry, Finland; ³University and University Hospital of Oulu, Finland, Institute of Clinical Medicine and Institute of Health Sciences, Department of Child Psychiatry, Finland; ⁴University and University Hospital of Tampere, Finland, Social Psychiatry Unit, Department of Psychiatry, Finland; ⁵Harvard Medical School, Massachusetts General Hospital, Boston, USA, Psychiatric and Neurodevelopmental Genetics Unit, USA

Background: Autism spectrum disorders (ASDs) are manifested by early onset of qualitative impairment in reciprocal social development, and these deficits are suggested to connect with the lack of the ability of sharing emotions and understanding commonness of human experiences, having theory of mind.

Aims: We examined whether children with ASDs and their family members are more commonly alexithymic than control children and their families.

Material and methods: The sample was collected from the patient records of the Clinic of Child Psychiatry, Oulu University Hospital. The patients, their parents and siblings were asked to participate in this study. A control group was gathered from elementary and upper-elementary schools at the region of Oulu. Altogether 44 ASD probands, mean age (ma) 13.7 years (y) (37 boys), their 39 siblings under 23 y, ma = 15.2 y (22 boys), 54 fathers and 45 mothers, and respectively 41 control children, ma = 13.3 y (23 boys) and 25 control fathers and 24 control mothers completed the Toronto Alexithymia Scale (TAS-20) questionnaire. The three factor structure of the scale was used, Factor1 = Difficulty identifying feelings, Factor2 = Difficulty describing feelings and Factor3 = Externally oriented thinking.

Results: The ADS probands scored higher than controls in TAS total score, in Factor1 and Factor2, and they scored higher than their siblings in Factor 2 and Factor 3. There was no difference in the TAS scores between the fathers of ASD children/adolescents and fathers of controls, neither between mothers of probands and control mothers. However the fathers in both groups scored higher than mothers in TAS total score, Factor2 and Factor3.

Conclusions: We found differences in the abilities of ASD children to identify and describe feelings. In adults these traits seem to be more closely gender specific abilities. These difficulties are needed to take into consideration in treatment.

W2-01-S

Neuropsychological abilities of children and adolescents with ASD and ADHD

Moilanen, Irma; Ebeling, Hanna

University and University Hospital of Oulu, Department of Child Psychiatry, Finland

This symposium is made up of four individual presentations from Finland and Egypt (1) Sherin elSheikh: Facial Affect recognition in Autism Spectrum Disorder, Attention Deficit Hyperactivity Disorder and Typically Developed Children in Egypt (2) Sanna Kuusikko: Neuropsychological Performance in Families with Autism Spectrum Disorders (3) Outi Reinvall, University of Helsinki: Neuropsychological Profile of Adolescents with Asperger Syndrome (4) Hanna Ebeling: Alexithymia among ASD children and their families The impairment in interpersonal relationships in ASD has often been explained at least partly to be caused by the difficulty to recognise the emotions of other persons. In the first presentation from Cairo we will hear, if this is true, and if this difficulty also occurs in other neuropsychiatric disorders, as e.g. ADHD. The facial affect recognition was assessed using a computer-based program. The second presentation from Oulu broadens the scope in reporting neuropsychological performance in families with a child with ASD. In addition, this presentation includes information of possible improving along with age, and also of areas of strength in children with ASD, when compared with typically developed children. The third presentation from Helsinki broadens further the scope to include the whole neuropsychological profile in adolescents with Asperger Syndrome and their typically developed controls, presenting both strengths and weaknesses. The fourth presentation analyses more deeply the possible difficulty of affect recognition by reporting alexithymia with its three subscales, difficulty in identifying feelings, difficulty in describing

feelings and externally oriented thinking, in children with ASD and their families.

W2-02-S

Psychiatric damage of children attacked by the tremendous earthquake and the monstrous tsunami in Japan and psychiatric intervention for them

Homma, Hiroaki; Yoshida, Hirokazu

Miyagi comprehensive Children's Center, Japan

The tremendous earthquake of magnitude 9 and the monstrous huge Tsunami of over 16 meters attacked the coastline of the east Japan on 11 March at 2:46 p.m. Those who live in the east Japan have been involved in the terrible catastrophe, especially in the coastline almost all of the construction was destroyed and a great number of people lost their lives. At the time of 9 April the number of the dead has reached 12,915 and the number of the missing has been estimated 14,921. Focusing on children in our Miyagi prefecture, there were a lot of victims, for example 127 of elementary school children. And quite a lot of children were deprived their parent, family, teacher and friends. At the shelter children had to endure the severe circumstances, for example lack of supply and the cold during several days. After Tsunami subsiding, another traumatizing condition waited for children, they witnessed several dead bodies around their living areas. In addition to these difficulties, quite a lot of children have to move out another town because of reconstruction of their home town. From the initial stage of the rescue Psychiatric Assistance Team from all of Japan has come into the stricken areas as a crisis intervention. We also now visit the most severe damaged areas by 4 teams of child psychiatric services. We would like to report about children traumatic difficulties and our struggles as the psychiatric crisis intervention against the terrible catastrophe that we have never experienced.

W2-03-1

Bullying at school: The development of a training manual for teachers

Assimopoulos, Haris¹; Yanakopoulou, Dimitra¹; Hatzimemou, Theologos¹; Vassilakaki, Evi¹; Tsiantis, John²; Fissas, Constantinos³

¹A.P.H.C.A., Greece; ²A.P.H.C.A., Scientific Director, Prof. of Child Psychiatry, Greece; ³A.P.H.C.A., Day Centre ORIONAS A.P.C.H.A., MA, Psychotherapist, Greece

Modern school is called to play a complex role that encompasses the promotion of not only learning but also psychosocial development of children. Emphasis is not only given to transferring knowledge but also to the emotional "environment" that reigns and surrounds learning processes and that, to a large extent, is defined by the type and quality of relationships between members of the school community. Regarding the phenomenon of bullying significant actions have been developed and applied internationally during the past 10 years, aiming at early preventive intervention in the school setting. One distinguishes three categories of such programmes: (a) interventions addressed to the whole student population and aiming at promoting the students' psychosocial development and health and at preventing the emergence of

problematic behaviours or other difficulties, (b) interventions addressed to parts of the student population that, for various reasons, may be facing factors that might put smooth psychosocial development at risk and (c) interventions aiming at the timely detection and treatment of early indications of some disorder or difficulty. The design and implementation of working plans for promoting student psychosocial health within the school and the intervention during school years probably is the most successful model for primary and secondary prevention. Modern methodology of working plans for the promotion of psychosocial health, and especially the phenomenon of school bullying, cannot be based on transmitting knowledge and informing students on the specific subject. On the contrary, it is based and it stresses relationships and interactions, the development of skills for improving students' self-confidence and the resulting capability to strengthen their skills to negotiate, set limits and make right choices. More specifically, it is based on life-experience, active, collaborative learning.

W2-03-2

Bullying in Schools: research and school based intervention program in Cyprus

Paradeisioti, Anna¹; Papacosta, Ernestina²; Chrysostomos, Lazarou²

¹Ministry of Health, Mental health Services for Children and Adolescent, Cyprus; ²Ministry of Education and Culture, Educational Psychology Services, Cyprus

The Mental Health Services for Children and Adolescents and the Educational Psychology Services in Cyprus cooperated in two European research Programs implementing research and anti-bullying actions through the Daphne II and Daphne III programs. Through the first program, a Pancyprian Epidemiological Study was implemented among Cypriot pupils. It was found that 17% of the Greek-Cypriot children are involved in some form of bullying and victimization. Through the second program, 10 primary schools from the five districts of the island (two from each, one as an experimental and the other as a control) participated in an intervention program. The sample was the teachers of all year levels and the Students aged from 10 to 12-year-old (grades 5 and 6). The evaluation tools were: The Olweus Bully and Victim Questionnaire: For teachers and primary school children The Goodman's Strengths and Difficulties Questionnaire: For teachers and students The Post-Traumatic Stress Questionnaire: For students Questionnaires for evaluation of the program: For teachers and students of experimental school. The Greek team developed a structured training manual for teachers, which all participating countries approved and used. After the teachers had been trained on it, they implemented 10 sessions to their students. The trained School Psychologists provided to them systematic supervision and support. Some of the results are: • After the implementation of the program students reported less emotional problems, hyperactivity, conduct disorder and peer relation problems • There was a significant difference between pre-and post- testing in the experimental group regarding the number of victims (reduction) Students in the experimental and control group reported around 10% serious or very serious PTSD symptoms according to the bullying phenomenon After the intervention program there was significant improvement in the experimental group according the PTSD.

W2-03-3

The bullying: incidence and impact on general health condition in secondary school students in Poland

Dabkowski PhD, Miroslaw¹; Dabkowska PhD, Monika²

¹Collegium Medicum in Bydgoszcz; Nicolas Copernicus University in Torun, Dpt of Child and Adolescent Psychiatry, Poland; ²Faculty of Pedagogical Sciences, Nicolas Copernicus University in Torun, Dept. of Special Pedagogy, Poland

Aggressive behaviors are natural basic forms of human behaviors' repertoire. This copying mechanism is often distorted, it is evoked in inadequate situation and in the too strict manner. Biological and as so genetically conditioned aggression can be also considered in respect of social dynamics. Aggressive behavior plays sublimative and training functions which fulfill the needs and desires. Those behaviors occur often inadequately for the lack of the real threat. The violence becomes a part of certain rules, but being a game it is still a painful reality: cruel and inhuman. All those briefly mentioned aspects of aggressive behaviors also refer to specific forms of violence called "bullying" among peer groups of children and youth. Children bullied by peers avoid school, reveal depressive, anxious and phobic as well as psychosomatic disorders and even attempt suicide. Not only is the chronic distress caused by direct threat, physical oppression, robbery and constraint, it is also a result of humiliation and the feeling of loneliness. The feeling of helplessness and the lack of support of the group is of great importance as far as permanent sense of wrong is concerned. This results in the distemper of socialization process, constant feeling of hopelessness, disapproval and social rejection. A common features among bullied victims is their low self-esteem also recognized as a factor which provokes bullying. A large proportion of children report being bullied at school. In our study conducted in last years in population of 13 y.o. pupils in two Torun secondary schools we assessed the incidence of this phenomenon and its impact on general health condition.

W2-03-S

Bullying at School

Tsiantis, John¹; Fissas, Constantinos²; Paradesiotou, Anna³; Dabkowski, Miroslaw⁴; Sourander, Andre⁵

¹A.P.H.C.A., Scientific Director, Prof. of Child Psychiatry, Greece; ²A.P.H.C.A., Day Centre ORIONAS A.P.C.H.A., MA, Psychotherapist, Greece; ³Mental Health Services, Makarios III Hospital, Nicosia, Department of Child and Adolescent Psychiatry, Cyprus; ⁴Polish Psychiatric Association-Scientific Section for Child and Adolescent Psychiatry Nicolaus Copernicus University, Dpt of Child and Adolescent Psychiatry, Poland; ⁵Turku University, Professor in Child Psychiatry, Finland

The aim of this symposium is to present bullying at school at some European countries (Greece, Cyprus, Poland and Lithuania). Regarding the phenomenon of bullying, significant actions have been developed and applied internationally during the past 10 years, aiming at early preventive intervention in the school setting. One distinguishes three categories of such programmes: (a) interventions addressed to the whole student population and aiming at promoting the students' psychosocial development and health and at preventing the emergence of problematic behaviours or other difficulties, (b) interventions addressed to parts of the student population that, for

various reasons, may be facing factors that might put smooth psychosocial development at risk and (c) interventions aiming at the timely detection and treatment of early indications of some disorder or difficulty. The intervention study was done through a research package in experimental and control groups of Primary schools in Athens and Alexandroupolis (NE) part of Greece. The intervention led to the development of a teacher's manual aiming, to the early recognition and prevention of bullying in schools. Dr. Sourander from Finland will also present his results from studies on Bullying in Finland and he will focus on Cyber Bullying.

W2-04-1

Oxidative und antioxidative mechanisms in juvenile and adult rats after haloperidol

Clement, Hans-Willi; Berger, Madeleine; Heiser, Philip; Sommer, Olaf; Hoinkes, Alexander; Schulz, Eberhard

Universityhospital Freiburg, Germany

Introduction: Tardive dyskinesia which is presumed to be connected with elevated oxidative stress, is described as a typical side effect of haloperidol. However, this neurotoxic effect of haloperidol is discussed controversially. In this context, previous studies gave little evidence for differences between adults and children as well as adolescents. The purpose of this study is to examine both oxidative mechanisms, substantiated by reactive oxygen species (ROS), and antioxidative mechanisms in juvenile and adult rats after application of haloperidol.

Material and methods: Measurement of (ROS) was performed using radical scavenger CMH by means of microdialysis and subsequent electron spin resonance (ESR) spectroscopy. Organ extraction was carried out 3 h after an acute application of Haloperidol (2 mg/kg i.p.). The organ parts were homogenized and their amount of ATP, reduced GSH, oxidized glutathione (GSSG), glutathione reductase (GR), glutathione peroxidase (GPX), glutathione-S-transferase (GST), superoxide dismutase (SOD) as well as NADPH oxidase were tested.

Results: No elevated radical formation could be measured in vivo following an acute dose of haloperidol—neither in young nor in old animals. Juvenile rats opposed to adult animals showed a higher ATP content in various brain areas and their antioxidative mechanisms seem to be less changed (GR, GPX, GST) than those of adult rats, while the GSSG content is higher in juvenile rats. Haloperidol lead to a reduction of antioxidative mechanisms in various brain areas in adult rats and changes in ATP. In juvenile rats, haloperidol seems to have rather little influence on antioxidative mechanisms.

Conclusion: While our results show that haloperidol does not directly influence radical concentration in both young and old rats, there is evidence that haloperidol clearly has noticeable, age-related effects on radical formation occurring on the level of radical detoxification mechanisms.

W2-04-2

Effects of antipsychotics on the formation of hydrogen sulfide in human cell lines

Clement, Hans-Willi¹; Schmidt, Andreas²; Sommer, Olaf¹; Hoinkes, Alexander¹; Heiser, Philip¹; Schulz, Eberhard¹

¹Universityhospital Freiburg, Germany;

²Universityhospital Marburg, Germany

Hydrogen sulfide (H₂S) is the third gaseous transmitter besides CO and NO. The enzymes involved in the formation of H₂S mostly are Cystathionin- α -lyase (CGL) and Cystathionin- α -synthetase (CBS). H₂S is involved in the regulation of various physiological functions such as neuromodulation, interacts closely with the glutamatergic neurotransmission and the regulation of glutathione, one the most important endogenous antioxidant. Since glutamate is a major transmitter involved in schizophrenia, we tested in our study the effect of antipsychotics on the expression of CGL and CBS in different cell lines. The cell lines U-397 (human monocyte) and SH-SY5Y (human neuroblastoma) were incubated with the antipsychotics haloperidol, clozapine, olanzapine and risperidone in different concentrations. The expression of the enzymes CGL and CBS was studied using RT-PCR. Either haloperidol or atypical antipsychotics lead to a significant reduction of the expression of CGL or CBS. Both cell lines were affected. Our results demonstrate that H₂S may play a physiological role in schizophrenia.

W2-04-3

Long-term cardiac adverse effects of ADHD medication in children and adolescents: a nationwide registerbased follow-up study

Dalsgaard, Soren¹; Nielsen, Helena Skyr²; Simonsen, Marianne²

¹University of Southern Denmark, Department for child and adolescent psychiatry, Denmark; ²Aarhus University, School of Economics and Management, Denmark

Background: The most commonly used pharmacological agent in the treatment of ADHD is methylphenidate (MPH). Numerous studies offers overwhelming evidence for the positive effects of MPH with significant reductions in severity of ADHD, impairment and a reduced risk of developing substance use disorder.

There is concern on the long-term effects of this treatment both in the public, among parents and also among professionals within mental health services.

Based on small clinical samples and case series the American Food and Drug Administration (FDA) issued a warning in 2007 that MPH may increase the risk of sudden death and that it is mandatory for doctors to assess cardiovascular history prior to treatment.

However, additional population-based studies that address associations between heart disease and long-term use of MPH, dosage comparisons, and interactions with pre-existing cardiac risk factors are needed.

Aims: To study the long-term cardiac adverse effects of MPH in children with ADHD.

Materials and methods: A cohort consisting of all children born in Denmark in the period 1990–1999 was identified using nation-wide registers ($n = 712,059$). This cohort was followed prospectively until December 2007. Data on clinical diagnoses of ADHD and all prescriptions of MPH in these individuals was extracted from registers along with data on cardiovascular diagnoses and data on prescriptions on any cardiac medication. In order to adjust for family history of psychopathology and cardiovascular disease corresponding data on all of these children's parents was also obtained, giving a complete dataset without any attrition.

Results and conclusions: Data has not yet been analysed. In the preliminary descriptive analyses around 6,500 children in the total study population were given a cardiovascular diagnosis and around 7,000 children had a clinical diagnosis of ADHD. The results of the analyses on associations between ADHD, treatment with MPH and later cardiovascular disease will be presented.

W2-04-4**A cross-over study in prepubertal boys with ADHD to investigate efficacy and bioequivalence of two modified release Methylphenidate formulations**

Fleischhaker, Christian; Hennighausen, Klaus; Schneider-Momm, Katja; Schulz, Eberhard

University of Freiburg, Child and Adolescent Psychiatry, Germany

Objectives: The primary objective of this single-blind, randomized, crossover study was to determine Pharmacokinetics (PK) and bioequivalence of 20 mg Ritalin LA compared to 20 mg Medikinet retard. Secondary objectives were efficacy, safety and tolerability.

Methods: 24 prepubertal boys aged 8–14 years with ADHD were enrolled. Cohorts of 6 subjects each were assessed on two different visit days by a 9-h classroom setting. Serum MPH concentrations, ratings of classroom behavior on the SKAMP were measured repeatedly.

Results: Among the patients (mean age 10.6 ± 1.8 years), the complete determination of the pharmacokinetic parameters could be performed for 20 patients. The mean Cmax serum MPH concentration for Ritalin LA was 18.3 ± 8.7 ng/ml compared to Medikinet retard 22.6 ± 9.3 ng/ml. The mean AUC (0–8 h) serum MPH value for Ritalin LA was 93.1 ± 57.2 ng/ml/h compared to Medikinet retard 111.4 ± 45.8 ng/ml/h. Equivalence could not be concluded at a 5% significance level. In approx. 50% of patients, MPH concentrations have formed two distinctive peak levels around 2 and 5.5 h. In a cross-over analysis, the SKAMP Scales showed no significant treatment effects. Regarding the subject's condition in the week prior to the visits, however, there was a significant positive effect in favor of Ritalin LA as assessed by the primary caregiver. For both medications, no serious adverse events could be observed.

Conclusions: An analogue classroom setting provides a reliable parallel assessment of behavioral and PK data. PK data showed remarkable inter-individual variations. In both medication groups, the pharmacokinetic profiles have revealed two distinctive peak levels in more than 50% of patients.

W2-05-1**Child and adolescent mental health services in multicultural Britain, hopes and challenges**

Sandhu, Tanveer

Department of Child and Adolescent Psychiatry, Birmingham Children's Hospital, UK

The United Kingdom has become one of the most multicultural societies in the Western world. The biggest impact Britain has made to the world culture is through the language of English, for all cultures to communicate with each other. Britain's long history of excellence in Education and colonial era has brought people of many nationalities together. Today UK has about 12% of ethnic minorities of Non-White origin. Britain has the biggest South Asian population in Europe and biggest Pakistani immigrant population in any country of the Western world. Race Relations Act (2000) states that all public authorities including National Health

Services have an explicit duty to promote race equality, eliminate racial discrimination and improve race relations. Britain has a very multicultural workforce: 30% of doctors employed is from minority ethnic background. Despite that today ethnic population is represented in all walks of life, there are issues around fuller integration of the immigrant and minority population. Similar issues are perceived by immigrant population in accessing various services. Survey reports in the UK suggest that Asian and African Caribbean people are less likely than people of white origin to have their mental health problems identified by their GP and by Child and Adolescent Mental Health Services. Services are perceived as not sufficiently sensitive to cultural diversity (Malek 2004). There is a need for more coordinated research to understand mental health needs of the children of ethnic minority and immigrants. Similarly lack of consistent training in cultural competency for staff in the Health Services is an issue that needs addressing. The presentation will go through various initiatives in the UK to improve mental health of minority ethnic population and review the success and challenges faced in the process. This submission is a part of workshop Transcultural issues in child and adolescent psychiatry: evidence and practice.

W2-05-2**Cultural competency in child and adolescent psychiatry: teaching and implementation**

Mian, Ayesha

Department of Psychiatry and Behavioral Sciences at Baylor College of Medicine in Houston, Texas, USA

Objectives: The field of cultural competence in medicine is focussed on learning a practical framework that inquires of all patients about how social, cultural and economic factors influence their health beliefs, values and behavior. For the field of child and adolescent psychiatry, culturally competent care encompasses knowledge of normal development compared to pathology within the concept of cultural identity. For trainees, it includes the development of skills, attitudes and perspectives to work in a system that may provide care for children from culturally diverse populations and their families. A framework for a cultural competency curriculum has been developed at the American Academy of Child and Adolescent Psychiatry (AACAP).

Methods: Participants will learn how the cultural contexts of both the physician and patient influence the clinical encounter. Video clips, reflective questions and large group interactive exercises will be used to introduce concepts of cultural competent communication and the incorporation of these principles in a child psychiatry training curriculum.

Results: Participants will have developed skills to teach and implement the cultural competency curriculum developed at AACAP. They will also have learnt about different needs assessment tools and cultural competency negotiation models to facilitate their teaching in different learner-patient interactions.

Conclusions: Teaching skills of culturally competent care and communication includes an ability to teach reflective practice around cultural differences, model and facilitate a patient centered interview as well as use an organized process to integrate cultural issues into everyday clinical teaching. This submission is a part of workshop Transcultural issues in child and adolescent psychiatry: evidence and practice.

W2-05-3**Culture of child mental health policies and services in different part of Europe: results of CAMHEE project***Puras, Dainius*

Department Psychiatry, Vilnius University, Lithuania

Background: Diversity of cultural context and historical background of European countries has led to different societal attitudes and sociocultural environment for development of child and adolescent (CAMH) mental health policies and services. Comparative analysis is needed between countries and regions, to better understand and manage the challenges of implementation of common European values based on modern child rights approach.

Objectives and methods: This presentation addresses contextual differences between CAMH policies and services in the EU countries representing “old” and “new” member states. Qualitative analysis of CAMH policies was performed by 36 partner organizations in 15 EU countries (8 of them—new EU member states which joined EU in 2004–2008), with special focus on issues which are of special concern for Europe: prevention of destructive and self-destructive behavior in schools, parenting and caring for the children of mentally ill parents, addressing a sad tradition of overuse of institutional care of children.

Results: All EU countries are facing challenges in the field of CAMH, with some similarities but also with striking differences. “Old” EU member states have developed higher level of governance and transparency (based on evaluation of outcomes), while in “new” member states still often evaluation is based on processes rather than outcomes. Institutional care, although remaining a serious concern throughout the European region, is much more overused in “new” member states. Community based services for mentally ill parents and their children are non-existent in “new” member states, with still strong tradition of separation of children from their mentally ill parents. These differences and their impact on mental health of children throughout Europe will be discussed. This submission is a part of workshop Transcultural issues in child and adolescent psychiatry: evidence and practice.

W2-05-S**Transcultural issues in child and adolescent psychiatry: evidence and practice***Sandhu, Tanveer*

Department of Child and Adolescent Psychiatry, Birmingham Children’s Hospital, UK

Dr Tanveer Sandhu (Chair), Department of Child and Adolescent Psychiatry, Birmingham Children’s Hospital UK Dr. Norbert Skokauskas (Discussant), Trinity College Dublin, Ireland Speakers: Dr Tanveer Sandhu, Birmingham Children’s Hospital UK Child and Adolescent Mental Health services in Multicultural Britain: Hopes and Challenges Prof. Fiona McNicholas, University College Dublin, Dublin, Ireland Multicultural Issues in Child and Adolescent Psychiatry in Ireland Cultural Competency in Child and Adolescent Psychiatry: Teaching and Implementation Dr. Ayesha Mian Baylor College of Medicine, USA Culture of child mental health policies and services in different part of Europe: results of CAMHEE project Dr. Dainius Puras, Vilnius University, Lithuania This workshop will

focus on distinctive cultural issues within child and adolescent psychiatry. It Aims to promote cultural competence (an ability to interact effectively with people of different cultures) among child and adolescent psychiatrists. Over the past decade, the field of cultural competence has moved from teaching the values and beliefs of individual culture groups to learning a more practical framework that inquires of all patients about how social, cultural and economic factors influence their health beliefs, values and behavior. For the field of child and adolescent psychiatry, culturally competent care encompasses knowledge of normal development compared to pathology within the concept of cultural identity and understanding the culturally competent model of service delivery. Participants will learn how the cultural contexts of both the physician and patient influence the clinical encounter, specifically in relation to child and adolescent mental health. By the end of this workshop, participants will be able effectively analyse cross cultural issues in child and adolescent mental health and put into action acquired cross-cultural competency skills and techniques. All speakers will submit their abstracts individually.

W2-06-1**Detecting adolescents at risk of developing psychosis: a population based study of brain structure and functions***Veijola, Juha¹; Mäki, Pirjo¹; Murray, Graham²; Jääskeläinen, Erika¹; Kiviniemi, Vesa¹; Miettinen, Jouko¹*¹University of Oulu, Finland; ²University of Cambridge, UK

Background: Research on prodromal phase of psychosis have been carried out almost exclusively in the population of people attending mental health services. We wanted to study if it would be possible to detect subjects at risk for developing psychosis in a general population and constructed a setting within the Northern Finland Birth 1986 Birth Cohort (NFBC 1986). This was done to explore the brain structure and functions in population level of adolescents at risk for psychosis.

Methods: The NFBC 1986 consists of 9,332 subjects. We used various prospectively collected data from earlier follow-ups together with register data. The Finnish Hospital Discharge Register was used to find parental psychosis of the members of NFBC 1986 (Familial Risk, $N = 272$). Another high risk psychosis group includes subjects who participated in a 15–16 year follow-up and who had risk symptoms of psychosis, or had had a recent nonpsychotic psychiatric hospitalisation (Symptomatic Risk, $N = 117$). Two patient comparison groups were invited to a clinical study at age of 23 years: subjects with psychosis ($N = 78$) and subjects with ADHD ($N = 103$). A random 2% sample ($N = 193$, controls) of the rest of the NFBC 1986 were also invited. Structured Interview for Prodromal Syndromes (SIPS) was used to detect index cases.

Results: Participation rate was 39% (294 out of 763 invited). In the Familial Risk group 12% (9/78) and in the Symptomatic Risk group 19% (11/59) fulfilled the criteria of current prodromal syndrome. Respective figures for psychosis, ADHD and controls were 0, 5 and 4%.

Discussion: Even though the setting was established to have participants with prodromal syndrome for psychosis, it appeared that only few were prodromal cases. Also the participation rate was rather low, and possibly the participation rate was especially low among subjects really at risk for developing psychosis.

W2-06-2**Brain structure in youth in different psychosis risk groups in the 1986 Northern Finland Birth Cohort**

*Murray, Graham*¹; *Roman, Andres*¹; *Kiviniemi, Vesa*²; *Miettunen, Jouko*³; *Maki, Pirjo*⁴; *Veijola, Juha*⁴

¹University of Cambridge, Psychiatry, UK; ²University of Oulu, Radiology, Finland; ³University of Oulu, Finland; ⁴University of Oulu, Psychiatry, Finland

Objectives: We compared brain structure between groups at clinical risk (CR), family risk (FR) or both family risk plus clinical risk (FRCR) for psychosis. We tested the hypothesis that risk for psychosis is associated with structural brain abnormalities, with increased deficits in those at both FRCR for psychosis.

Methods: We identified subjects within the Northern Finland 1986 Birth Cohort ($n = 9,479$) using register and questionnaire based screening, and interviews using the Structured Interview for Prodromal Symptoms. After this procedure, 172 subjects were included in the study, classified in as controls (CON, $n = 73$) and three risk groups: FR excluding CR (FR, $n = 60$), CR without FR (CR, $n = 26$), and individuals at both FR and CR (FRCR, $n = 13$). T1-weighted brain scans were acquired and processed in a voxel-based analysis using permutation-based statistics.

Results: In the comparison between FRCR versus CON, we found lower grey matter volume (GMV) in a cluster (1689 voxels at -4.00 , -72.00 , -18.00 mm) covering both cerebellar hemispheres and the vermis. This cluster was subsequently used as a mask to extract mean GMV in all four groups: FR had a volume intermediate between CON and FRCR. Within FRCR there was an association between cerebellar cluster brain volume and motor function.

Conclusions: FRCR had a cerebellar deficit that was associated with impaired motor function. FR had a cerebellar GMV intermediate between FRCR and CON. These findings are consistent with an evolving pattern of cerebellar deficits in psychosis risk with the most pronounced deficits in those at highest risk of psychosis.

W2-06-3**Default mode network in adolescents with familial risk for psychosis**

*Jukuri, Tuomas*¹; *Kiviniemi, Vesa*²; *Nikkinen, Juha*²; *Veijola, Juha*¹

¹University of Oulu, Department of psychiatry, Finland; ²University of Oulu, Department of radiology, Finland

Background: Default mode network is so-called non-task network, which activates while resting. In schizophrenia patients alterations in the default mode network has been described, mainly higher activation in resting state than in control subjects. There are no studies describing the activation of default mode network in subjects with familial risk of psychosis.

Methods: We invited 74 subjects with familial risk of psychosis and 77 control subjects to participate in a field study including resting state functional MRI (R-fMRI). We detected subjects with familial risk of psychosis using The Finnish Hospital Discharge Register. Subjects with psychosis were excluded. All subjects were members of the Northern Finland 1986 Birth Cohort. The field

study was conducted during 2007–2010, when the subjects were aged 20–24 years. Intelligence was measured with the Wechsler Adult Intelligence Scale III, Finnish version. General Electric 1.5 Tesla MRI was used for R-fMRI in the University Hospital of Oulu. Using R-fMRI we compared subjects with familial risk of psychosis to control subjects to determine if there is alteration in R-fMRI signal in the default mode network. All gathered R-fMRI signal was pre-processed with normal FSL routines with FSL MELODIC PICA with dual regression approach between groups. Results were corrected for multiple comparisons using TFCE ($p < 0.05$).

Results: In the R-fMRI the two groups differed in the activation of the default mode network: there was higher activation in the posterior cingulate cortex/precuneus in subjects with familial risk of psychosis.

Discussion: This was perhaps the first R-fMRI study exploring differences between young subjects with familial risk of psychosis and control subjects in the default mode network. The findings were rather similar as have been found in subjects with schizophrenia. This study refers to the fact that R-fMRI may be valid instrument to help detect subjects with high risk for developing schizophrenia.

W2-06-S**Brain structure and functions in adolescents at risk of developing psychosis**

Veijola, Juha

University of Oulu, Finland

Background: We invited subjects with familial risk (FR) and Clinical Risk (CR) of psychosis to participate in a field study including MRI scanning of the brain.

Methods: Subjects were members of the Northern Finland 1986 Birth Cohort. The Finnish Hospital Discharge Register was used to find parental psychosis of the members of NFBC 1986 (Familial Risk, $N = 272$). Another high risk psychosis group includes subjects who participated in a 15–16 year follow-up and who had risk symptoms of psychosis, or had had a recent nonpsychotic psychiatric hospitalisation (Symptomatic Risk, $N = 117$). A random 2% sample ($N = 193$, controls) of the rest of the NFBC 1986 were also invited. Structured Interview for Prodromal Syndromes (SIPS) was used to detect index cases. The field study was conducted during 2007–2010, when the subjects were aged 20–24 years. General Electric 1.5 Tesla MRI was used in the University Hospital of Oulu. Both brain structure and function was measured.

Results: In the comparison of subject who belonged in both risk groups (FR and CR) versus control subjects, we found lower grey matter volume in a cluster covering both cerebellar hemispheres and the vermis. In the Resting state MRI FR group and controls differed in the activation of the default mode network: there was higher activation in the medial prefrontal cortex and in the posterior cingulate cortex/precuneus in subjects with familial risk of psychosis.

Discussion: We found both structural and functional differences between subjects who were at risk of developing psychosis and control subjects in a population based setting. Three presentations in this pre-arranged symposium: Veijola et al. Detecting adolescents at risk of developing psychosis—a population based study of brain structure and functions. Murray et al. Brain structure in different psychosis risk groups in youth in the 1986 Northern Finland Birth Cohort Jukuri et al. Default mode network in adolescents with familial risk for psychosis.

W2-09-1**Using internet sharing evidence based knowledge with teenage patients-two European initiatives**

*Forsbeck Olsson, Ulla*¹; *Wolpert, Miranda*²; *Söderström, Bengt*¹; *de Ruijter, Ariëlle*³

¹Child and Adolescent Psychiatry, Stockholm County Council, Sweden; ²University College London and Anna Freud Centre, CAMHS Evidence Based Practice Unit, UK; ³Dutch National Knowledge Center for Child and Adolescent Psychiatry, The Netherlands

The website *Choosing What's Best for You* will be launched in April 2011. It was developed in cooperation between CAMHS EBPU, Evidence Based Practice Unit of University College London and Anna Freud Centre, and Child and Adolescent Psychiatry, Stockholm County Council. It is based on a booklet published by EBPU in 2007. The scientific overview underlying the information on the website was updated in 2011. The website provides a comprehensive and updated overview of what research has found out helps for different mental health conditions of children and adolescents. It is currently in English and Swedish, but versions in other languages may easily be added. When the website is launched, UK and Swedish mental health professionals will be invited to use it as a tool to facilitate the involvement of teenage patients in planning and making decisions about their own treatment. It will be used as a reliable source of information when the clinician discusses treatment options with the teenager. Research findings may then be considered along with what local treatment options are available, what clinical experiences there are of other types of treatment not yet sufficiently researched, and what the clinicians own experience is. The clinicians will be provided with a manual to facilitate this. Their experiences of using the website in this manner will be surveyed. In The Netherlands the Dutch National Knowledge Centre for Child and Adolescent psychiatry launched a website for children and teenagers named 'Brainwiki' in January 2011, with evidence-based information focussed on children. The website is attractive for children and teenagers, and relevant parts have been translated in English. The presentation will include demonstration of the websites and a presentation of how the websites were developed and how the research overview was updated. Preliminary findings may be presented from evaluations by mental health professionals UK and Sweden, using the website with teenage patients.

W2-09-2**Depressed adolescents' adherence to an Internet-based self-help programme to assess depression: preliminary findings**

*Kurki, Marjo*¹; *Anttila, Minna*²; *Koivunen, Marita*³; *Kaltiala-Heino, Riittakerttu*⁴; *Martunen, Mauri*⁵; *Välämäki, Maritta*⁶

¹University of Turku, Department of Nursing Science, Finland; ²University of Turku, Finnish Post-Graduate School in Nursing Science, Finland; ³Satakunta Hospital District, Finland; ⁴The Pirkanmaa Hospital District, Finland; ⁵Hospital District of Helsinki and Uusimaa, Finland; ⁶University of Turku, Department of Nursing Science, Finland

Background: Internet is an essential part of adolescents' daily lives and could be one possible way to reach adolescents in need of mental

health services. The need for new and innovative treatment programmes is evident in the prevalence rates of adolescent depression and anxiety internationally. The question is, however, how dedicated are depressed adolescents in using electronic self-help systems, especially when their mental condition is severe.

Aim: To explore adherence in depressed adolescents in assessing depression disorders on an Internet-based self-help programme.

Material and methods: The study is part of a larger RCT where an Internet-based self-help programme was developed and evaluated with adolescents aged 15–17 (funded by the Academy of Finland 2006–2009). Adolescents were allocated to two groups: intervention group (Internet-based self-help programme) and control group (treatment as usual). The 5-week Internet-based self-help programme includes information and exercises to support adolescents' self-reflection. The self-reflection method was the 21-item Beck Depression Inventory (BDI-21). The data were collected from intervention adolescents ($N = 72$) who completed the BDI-21 in the second week of the programme.

Results: Out of 72 adolescents 32 completed the BDI-21 in the second week of the Internet-based self-help programme. In the second week 38 of the adolescents used the programme but 6 of them did not complete the BDI-21. Most of the adolescents (75%) who completed the BDI-21 have moderate or severe depression disorders (a sum score of 17 or more).

Conclusion: Adolescents with moderate or severe depression were adhered to assess their depression disorders. Therefore it is important that the responsibility for treatment rests with the adolescent mental health clinic. Further research is needed to find factors related to adolescents' adherence to the Internet-based self-help programme in mental health care.

W2-10-1**Studying human brain in naturalistic conditions**

Sams, Mikko

Aalto University School of Science, Dept Biomed Eng Comp Sci (BECS), Finland

Understanding how the human brain directs behavior in highly complex social environments that we encounter in our everyday lives arguably presents the ultimate challenge in cognitive neuroscience. Modern functional neuroimaging techniques, such as functional Magnetic Resonance Imaging (fMRI), are making it possible to answer this question and indeed there are a wealth of studies that have contributed to our understanding of the neural basis of perception using carefully controlled stimuli and tasks. However, to a significant extent it remains to be determined whether the results that have been obtained can be generalized to real life conditions. Using more natural stimuli may assist in observing patterns of brain activation that are difficult to observe in classical experiments. For example, Bartels and Zeki (2004) demonstrated that different brain areas show more independent activity patterns while watching natural connected movies even when compared to experiment using short video clips in a more traditional blocked paradigm. Thus, it is important to develop methods that allow one to study the human brain under ecologically valid naturalistic stimulus and task conditions. One such method is using movies and music pieces as very complex but well-planned dynamic stimuli, which can be played identically to several subjects. Brain signals, measured e.g. with functional magnetic resonance imaging (fMRI), can be analyzed with various ways, one of which is calculating to what extent different parts of

subjects' brain show correlated activity during the stimulation. In my presentation, I will describe such methods, and suggest that such methods can be especially useful in analyzing clinical populations.

References: Bartels A and Zeki S (2004) Functional brain mapping during free viewing of natural scenes. *Hum Brain Mapp* 21:75–85

W2-10-2

Early communicative skills in infants

Huotilainen, Minna

Finnish Institute of Occupational Health and University of Helsinki, Cognitive Brain Research Unit, Finland

Brain research has recently demonstrated several previously unknown skills in infants. According to studies performed on the electro-magnetic brain activity of sleeping neonates, they possess speech processing abilities that are of much higher level than expected. For example, their brains show the mismatch negativity (MMN) response not only to changes in simple sound features like change of pitch, duration, or timbre of the sound, but also to more complex changes like changes in the combinations or co-occurrences of sound features, or changes in the direction of the pitch change in sound pairs. These examples demonstrate that features crucial for interpreting spoken language can already be modelled automatically in the brains of sleeping neonates. Importantly, neonates already segregate sounds into sound streams according to their pitch, making it possible to follow one sound source in the presence of other sources, which is a very natural learning environment for speech. The brain responses demonstrated in paradigms of statistical learning suggest that this very basic means of speech analysis, i.e., making use of the most typical co-occurrences of syllables like *ba-* and *-by*, can already be utilized by the new-born infant even while sleeping. Experiments studying brain and behavioural responses to the native and non-native language demonstrate that several native-language-related skills are present already at birth, suggesting auditory learning already during the fetal period. Taken together, these recent results highlight the auditory communicative capabilities of infants and the surprisingly fast learning capacities of their plastic brains.

W2-10-3

Characterization of impaired communication in autism spectrum disorders

*Saalasti, Satu*¹; *Tiippa, Kaisa*¹; *Laakso, Minna*¹; *Jansson-Verkasalo, Eira*²; *Sams, Mikko*³

¹University of Helsinki, The Institute of Behavioral Studies, Finland;

²University of Oulu, Logopedics and Neurocognitive Unit, Finland;

³Aalto University, BECS, Finland

Communication requires complex use of affective, linguistic-cognitive, and perceptual elements. Asperger Syndrome (AS) is one of the autism spectrum disorders where both verbal and non-verbal communication difficulties are at the core of the impairment. In a series of studies some of the underlying elements of impaired

communication were investigated. The aim of the study series was to characterize linguistic and perceptual factors that may contribute to difficulties in face-to-face communication in AS. The language skills of children with AS were studied. Thereafter, the recognition of facial expressions of basic emotions with different amount of visual detail was studied. Finally, audiovisual speech perception and eye gaze behavior in adult individuals with AS was studied by utilizing the “McGurk effect” in which conflicting visual articulation alters perception of heard speech. Results of our study series show that the elements behind the communication difficulties in AS are diverse, but might point to a shared neurocognitive origin. Individuals with AS were impaired in comprehension of instructions, in recognizing facial expressions on the basis of very low spatial frequencies, important for processing global information and in multisensory perception of speech. Participants with AS integrated audiovisual speech differently from controls. Importantly, both groups were equally accurate in recognizing auditory and visual speech presented alone. All these findings are likely to contribute to the difficulties in face-to-face communication and may be based on associations between motor commands and sensory feedback. Thus, the role of the motor system might prove to be essential for well functioning communication.

W2-10-4

Brain imaging of autism spectrum disorders: towards natural viewing conditions

Salmi, Juha

Aalto University, Biomedical Engineering and Computational Science, Finland

Brain imaging studies of autism spectrum disorders (ASD) have mainly focused on strictly controlled but highly artificial task settings. However, it can be argued that simplified tasks are not optimal in capturing diverse cognitive deficits associated with ASD, and it is unclear how findings of simplified tasks are actually related to real-life problems in ASD. Behavioral studies have suggested that, in contrast to simplified conditions, natural viewing conditions can effectively reveal biases in cognitive functions in ASD that correspond with real-life. We performed a line of studies that (1) demonstrate that many of the brain functions thought to be altered in ASD (e.g., biological vs. non-biological motion processing, and face processing) can be studied also in dynamic conditions, and (2) show that natural viewing can reveal the biases in complex cognitive functions, even in a group of relatively high-functioning subjects with Asperger syndrome (AS). The line of studies described here includes a series of 3 studies with healthy adults, and one study that included 12 adult subjects with AS and a group of age, gender, and IQ matched healthy controls. All studies were performed with 3T fMRI (GE Signa Excite). Studies with healthy adults applied model-based analysis to characterize functions of well-known brain systems (sensory areas, attention and emotion networks) during natural viewing. In studying the differences between AS and healthy controls during natural viewing we used mainly data-driven analysis. Clear differences were observed in parieto-frontal networks that have been associated with voluntary attention and movement processing, and anterior cingulate cortex that has been related to atypical self-representation in ASD. In summary, we demonstrate that brain functions underlying ASD and other developmental disorders can be studied in more ecologically valid conditions that may help in capturing the neuronal underpinnings of real-life problems in ASD.

W2-10-S

Current brain research on social interaction and communication

Sams, Mikko

Aalto University School of Science, Dept Biomed Eng Comp Sci, Finland

Human minds do not function in isolation processing information from the outside world in highly individualistic ways. On the contrary, they minds are in constant interaction especially with conspecifics but also with other organisms like pets and other domesticated animals. Such coexistence requires mutual understanding in a sense of sharing minds with others. How such sharing, intersubjectivity, is achieved is a key question in an enterprise to understand human mind. Recently, a discipline called social neuroscience has started to unravel neural basis of different aspects of social behavior. Human beings have evolved to be especially good in understanding minds of the others. At the functional level, shared understanding of objects, events and social encounters is one of the prerequisites for coordinated social behaviour, as we need to understand well enough how others perceive and experience the world, and how they use both language and non-verbal signs to communicate their subjective feelings and thoughts, to interact effectively. In this symposium, we present new methods as well as experimental results on research on neural mechanisms of social interaction and communication. Dr. Sams summarizes recent advances in studying human brain with functional Magnetic Resonance Imaging (fMRI) in naturalistic conditions. Dr. Huotilainen describes new findings about infants' unexpected skills in discriminating between complex speech stimuli and segregating sounds into sound streams. Satu Saalasti characterizes the difficulties persons with Asperger syndrome have in recognition of facial emotions as well as in integrating audiovisual speech. Dr. Salmi describes the use of naturalistic stimulation in understanding functional brain networks both in healthy subjects and in subjects with Asperger syndrome.

W2-11-1

Early relationships and child development-training Russian professionals in attachment-learning to observe

Dovbnya, Svyatoslav¹; Morozova, Tatiana²; Britten, S.³

¹Firefly Children's network, St.Petersburg, RUSSIAN FEDERATION; ²Firefly Children's network, St.Petersburg, RUSSIAN FEDERATION; ³HealthProm, UK

"Early Relationships and Child Development" is a documentary film made for professionals dealing with young children and their families. The film was made by British and Russian professionals as a part of the "Young Children Attachment Project" financed by EU. Childcare and social work professionals in Russia and other transitional countries lack training in observing signs of poor attachment and understanding what young children are saying without words. The video emphasizes the importance of good attachment and shows how to spot signs of poor attachment in children from baby homes. The biological, physical and emotional discomfort caused by poor attachment and baby's emotional and social needs crucial to his development will be discussed. Using footage shot in one of the baby homes in Russia the video demonstrates that even though children do not remember the early childhood trauma, there is

physiological, psychological and emotional damage caused by poor attachment structure: 23 min documentary is following the stories of four children placed to the baby home. In the video we will see that although these children cannot yet speak about their distress, they can show us how they are feeling. They tell us how they feel by how they look and what they do. We will observe some of the types of behaviors that signal the need for attachment and emotional involvement. The Child Care Policy in many countries is aimed to prevent institutionalization of young babies. Many clinicians working with children today have not seen the effects of institutions on child development. This footage help clinicians to recognize the signs of partial deprivation of secure attachment to, and reciprocal relations with, a parent or substitute. This film is used in Russia to train Child Care professionals (psychologists, social workers, medical professionals) and future foster and adoptive parents to learn more about the needs of stable secure relationships. The video has English Subtitles.

W2-11-3

Attachment to the key worker in hostel-based vulnerable young persons

Sochos, Antigonos; Richards, Anita

University of Bedfordshire, Psychology, UK

This is part of a larger longitudinal study exploring the role of attachment in the resident-key worker relationship in two hostels for homeless young persons. Present data have been the first collected at Time 1 from 53 residents and their key workers. An about equal number of males and females were included in the resident sample, 60% were white, mean age was 20 years (SD 3.5). The key workers were predominantly white and female (mean age 43, SD 17) and all but two had only basic social care qualifications. The young persons completed four self-report questionnaires: the adapted Client to Therapist Scale, the Adolescent Unresolved Attachment Questionnaire, the Adolescent Attachment Questionnaire, and the Impact of Event Scale. The key workers completed: the Maslach Burnout Inventory, the Impact of Event Scale, the Secondary Traumatic Stress Scale, and the Experiences in Close Relationships Questionnaire. According to the main findings, fear of losing the parent ($\beta = 0.57$, $p = 0.001$) and perceived unavailability of the parent ($\beta = 0.36$, $p = 0.024$) independently predicted a preoccupied attachment strategy towards the key worker. Moreover, key workers' post-traumatic distress moderated the effect of young persons' post-traumatic distress on the formation of a preoccupied attachment to the key worker ($\Delta R^2 = 0.21$, $p = 0.001$) and attachment anxiety in the key worker moderated the effect of young persons' fear of losing the parent on key workers' sense of personal accomplishment ($\Delta R^2 = 0.10$, $p = 0.021$). These preliminary findings may help us understand better the interpersonal processes involved in support provision to vulnerable youth people and identify mechanisms that hinder such provision.

W2-11-4

Early relationships and child development-infant psychiatry as part of comprehensive childpsychiatric service in Porvoo area

Turunen, Merja-Maaria

Hospital District of Helsinki and Uusimaa, Porvoo Hospital, Finland

Porvoo hospital district has a catchment area of 90,000 inhabitants. It consists of three larger centers and large rural area. The district is strongly bilingual, where both Finnish national languages: Finnish and Swedish are spoken. The child psychiatric services are outpatient services include a staff of 18 (2,5 child psychiatrists). The area uses least child psychiatric hospital days in whole Hospital District of Helsinki and Uusimaa. The clinic started the first infant psychiatry group in Finland 20 years ago. Work is guided by intensive collaboration with well baby clinics in primary health care, with child protection services, adult psychiatric services and the obstetric unit. Working methods include work with mother and father, individually and as a couple and supporting early relationship between the baby and mother. Work is often started already during pregnancy and can continue till the baby is 1-year-old—sometimes even further. Interaction is regularly evaluated using the video based method developed by Mariannw Marschak, where different domains of parent-baby relationship are observed and evaluated. The video is shared with the parent in a therapeutic way. Sometimes baby and parent is involved in Theraplay-treatment for a period. Clinic provides also mother-baby group work. Many mothers come already during pregnancy if there are severe risk factors (traumatic experiences, psychiatric illness) in mother's history or the mother has difficulties in adapting to the pregnancy or the coming baby. Work is characterized by high emotional intensity; quick response to the mother's and baby's needs and time consuming home visits. Supervision is essential even for experienced staff. Work with infants and their parents are very rewarding: good results are sometimes seen very quickly and baby's problems tend to activate the available network in a special way. Babies also work very hard to engage their mother's in the relationship. Cases will be discussed.

W3-01-1

Implications of resilience concepts for scientific understanding and for policy/practice

Rutter, Michael

Institute of Psychiatry, King's College London, UK

Resilience is defined in terms of a resistance to stress or adversity or an overcoming of the consequences. The differentiation between the concept of resilience and concepts of risk and protection, using a range of different forms of evidence on various aspects of the concept, will then be discussed. The same will be done regarding promotion of resilience before, during, and after adversity demonstrating that resilience is an interactive concept that focuses on individual differences in response to risk. It has been based on evidence regarding risk and protective factors but it differs fundamentally in concentrating on within-group differences and in considering process mechanisms that are outside the balance of risk and protective factors. It concludes with the policy and practice implications, including messages of both hope and caution.

P01-01

Ferritin levels and severity of attention deficit-hyperactivity disorder symptoms in children and adolescents

Alda, José A.; Serrano, Eduardo; Ortin, Ana; Fusté, Adriana; Salra, Naima; Mairena, M^a Angeles; Ortiz, Juan J.; San, Luis

Hospital Sant Joan de Déu, Department of Child and Adolescent Psychiatry, Spain

Introduction: Many studies have indicated that dopamine may have an important role in the symptomatology of Attention Deficit Hyperactivity Disorder (ADHD). Iron is a coenzyme of tyrosine hydroxylase, which is critical in dopamine synthesis. Low ferritin levels in childhood have been reported to affect the development of the central nervous system, leading to behavioural disorders.

Objectives: To study the relation between ADHD symptoms and behaviour problems with serum ferritin levels.

Methods: Ninety-nine naive ADHD children and adolescents between 5 and 17 years old (mean 9.86; SD = 3.03 years), consecutively referred to ADHD unit were evaluated with the Conners Parent Rating Scale (CPRS), Conners Teacher Rating Scale (CTRS), Attention Deficit Hyperactivity Disorder Rating Scale-IV (ADHD-RS-IV) Home and School version, Child Behaviour Checklist (CBCL), Teacher Report Form (TRF), and blood tests including serum ferritin levels.

Results: There was a negative correlation between serum ferritin levels and scores on the ADHD-RS-IV Home version ($r = -0.212$; $p = 0.05$). ADHD children with low ferritin levels ($<30 \mu\text{g/L}$) obtained significant differences on the TRF scales of externalizing problems ($t = 2.291$, $p = 0.024$, CI 0.573–8.066) and on the CTRS scale of ADHD Index ($t = 2.42$, $p = 0.018$, CI -0.307 to 7.130).

Conclusions: These findings add to the growing literature about relation of serum ferritin levels and severity of ADHD symptoms and behavioural problems reported by teachers and parents.

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P01-02

Assessments of the executive function in preschool children with symptoms of conduct disorders

Araujo Jiménez, Eva Angelina¹; Jané Ballabriga, María Claustré²; Bonillo Martín, Albert³; Riera, Ramón⁴

¹Universitat Autònoma de Barcelona, Department of clinical and health psychology, Spain; ²Universitat Autònoma de Barcelona, Department of clinical and health psychology, Spain; ³Universitat Autònoma de Barcelona, Department of Psychobiology and Methodology of Health, Spain; ⁴EAP Osona, Spain

Introduction: The Executive Function is a group of cognitive processes that develop from childhood and which facilitate the achievement of goals and solve problems. The skills that compose it are: anticipation and goal setting, strategies of planning, initiate of activities and mental operations, self-regulation, working memory, organization in time and space, inhibitory control. Recent studies agree that there are problems in the Executive Function in children with Attention Deficit and Hyperactivity Disorder, Oppositional Defiant Disorder and Conduct Disorder. These disorders are characterized by failures in the reaction time in tasks of inhibitory control, planning activities and working memory. The aim of this study was to assess the Executive Function in children of 3–6 years that presented symptoms of conduct disorders.

Materials and methods: The evaluation was made through an inventory for parents and teachers to estimate the capacities of

Executive Function in nine scales related to each of the processes in that function. Was conducted in a rural and urban sample of Catalunya, Spain (N = 444).

Results: It found correlation between symptoms of Attention Deficit and Hyperactivity Disorder, Oppositional Defiant Disorder, Conduct Disorder and deficit in the Executive Function. In addition with children who combined symptoms of Attention Deficit and Hyperactivity Disorder showed most affectation in executive processes.

Conclusion: The Attention Deficit and Hyperactivity Disorder, Oppositional Defiant Disorder and Conduct Disorder are clearly affected by an alteration in the Executive Function from an early age.

P01-03

Alterations in social reciprocity in attention-deficit hyperactivity disorder

Ayaz, Ayse Burcu¹; Ayaz, Muhammed¹; Yazgan, Yanki²

¹Adapazari State Hospital, Child and Adolescent Psychiatry Clinic, Turkey; ²Marmara University Medical Faculty, Child and Adolescent Psychiatry Department, Turkey

Background: Children with ADHD often engage in inappropriate social interactions as well as they have impairments of functioning in cognitive and behavioral domains. It is considered that social problems in ADHD may originate from a failure to attend to the appropriate cues of affect.

Aims: To explore the association between the ability of decoding emotional facial expressions and social reciprocity in a group of children with ADHD between 12 and 16 years (n = 64) and to compare them with healthy control children (n = 69).

Methods: Parents completed Child Behavior Checklist (CBCL) and Social Reciprocity Scale (SRS). Participants were required to interpret emotional cues from pictures of facial expressions with a test adopted from Reading Mind in the Eyes Test (RMET).

Results: Children with ADHD were significantly less accurate while interpreting emotions and scored lower on a measure of social reciprocity than healthy controls (p = 0.00 and p = 0.00 respectively). Gender did not affect decoding ability or social reciprocity whereas boys revealed more problems than girls. In both groups, there were significant correlations between the scores on all subtests of CBCL and specific domains of social dysfunctioning. A regression analysis indicated that the presence of a diagnosis of ADHD and lower interpreting ability of emotional facial expressions were found to predict impairments in social reciprocity.

Conclusions: Our results support previous findings that the degree of social reciprocity in ADHD children is associated with the ability to decode emotional facial expressions and is lower in the case of an ADHD diagnosis.

References:

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P01-04

Attention deficit-hyperactivity disorder and intellectual disability: Neuropsychological profile in a response inhibition task

Bescos, Maria; Smith, Anna; Simonoff, Emily

Institute of Psychiatry, King’s College London, Department of Child and Adolescent Psychiatry, UK

The cognitive aspects of attention deficit hyperactivity disorder (ADHD) and comorbid intellectual disability (ID) are still unknown in contrast with the vast literature in ADHD and average IQ. This study examines whether children with ADHD + ID, according to the “dual diagnosis hypothesis”, show more impaired profiles to those with ADHD using a selective inhibitory motor response task (Go-No Go), which consistently reveals deficits in children with ADHD and average ability.

Participants and method: Children between 6 and 16 years old (23 with ADHD and mild/moderate ID, 23 with ADHD and average IQ and 23 healthy controls) were compared during the Go-No Go task. We predicted the ADHD + ID group would obtain significantly higher scores in reaction time (RT), standard deviation of reaction time (SD of RT) and omission errors and lower scores in probability of inhibition (PI). Analysis of variance (ANOVA) was used for RT, SD of RT and PI; and ordinal logistic regression analysis for omission errors. Mental age (MA) was later included as a covariate.

Results: Contrary to our predictions, the ADHD + ID group showed significantly faster RT than the ADHD group but it did not differ from controls. ADHD + ID children had also similar levels of PI and SD of RT to the ADHD group. Both clinical groups were significantly different than the control group again in PI and SD of RT. Although differences remained for the ADHD + ID group after controlling for MA in PI, they disappeared for SD-RT. Finally, ADHD + ID children had more omission errors than ADHD and controls, even after controlling for MA.

Conclusions: The differences found in RTs are unexpected given the general literature of ADHD, but consistent with those found in adults with ID. Children with combined type ADHD + ID show similar deficits in PI than combined type average IQ ADHD children, but a distinctive deficit in omission errors when performing in the Go-No Go task. This can have implications for management plans in the ID group.

P01-05

ADHD and intellectual disability: preliminary results in performance and reward effects in a sustained attention task

Bescos, Maria; Smith, Anna; Simonoff, Emily

Institute of Psychiatry King’s College London, Department of Child and Adolescent Psychiatry, UK

Deficits in sustained attention and motivational effects in cognitive tasks have been mainly described and tested in children with attention-deficit hyperactivity disorder (ADHD) and average IQ, but under researched in comorbid ADHD and intellectual disabilities (ADHD + ID). This pilot study examines whether ADHD + ID children, according to the “dual deficit hypothesis”, show worse

deficits than those with ADHD in a Continuous Performance Task (rewarded CPT-AX) and the effects of reward on their performance. **Methods:** 17 ADHD children with mild/moderate ID, 24 with ADHD and average IQ and 28 healthy controls were compared on the CPT-AX. We predicted that the ADHD + ID group would have slower reaction times (RT), higher standard deviations of RT (SD-RT) and more omission, commission errors and premature responding. Both ADHD groups would improve or normalised their performance under reward due to increased motivation. Mixed two-way analysis of variance (ANOVA), Kruskal–Wallis test and logistic regression analysis were used where appropriate, including mental age (MA) later as a covariate.

Results: The main results were for SD-RT, after covarying for MA, higher SD-RT in the combined group compared to the average IQ groups were reduced to a trend. The ADHD + ID group was similar in omission errors to the ADHD group and both differed significantly from controls. Premature responding to a target in the combined group was significantly different from controls and non-significant, but pointing to a significant trend compared to ADHD children. The previously described differences remained after controlling for MA. No differences in RT, commission errors or differential reward effects in any variable were found.

Conclusions: ADHD + ID children showed a similar deficit in omission errors to that of children with ADHD in the CPT, while the results in premature responding may point to a distinct deficit. Reward did not affect performance differently in the ADHD + ID group as compared to other groups.

P01-06

Duloxetine in comparison with methylphenidate in treatment of adolescents with ADHD

Dodangi, Nasrin¹; Tehrani-Doost, Mehdi¹; Mahmoudi-gharaei, Javad²; Rajabi, Gilda²

¹Tehran University of Medical Science, Psychiatry, Islamic Republic of Iran; ²Tehran University of Medical Science, Islamic Republic of Iran

Background: ADHD is one of the most common childhood onset psychiatric disorders. Stimulants are the first line treatment but alternative treatments are necessary. Several studies have reported that venlafaxine is effective in treatment of ADHD. Duloxetine another antidepressant agent with the same mechanism may be effective in treatment of ADHD.

Aim: In this study, in a 6 weeks clinical trial we compared the treatment effect of duloxetine with methylphenidate in two groups of adolescents with ADHD.

Materials and methods: A total number of 34 adolescents aged 11–18 years with ADHD were enrolled in the study and allocated between Methylphenidate and Duloxetine groups. Subjects were selected from adolescents who were referred to child and adolescent psychiatric clinic of Roozbeh Hospital and Tehran Children Medical Center in 2009. The diagnosis was made by two child and adolescent psychiatrist according to DSM-IV-TR criteria. Demographic characteristics were recorded at first. K-SADS-PL interview was used for diagnosis of ADHD and the comorbidities. ADHD symptoms severity were assessed using Conners Parent Rating Scale-Revised: Short (CPRS-R: S) at base line and every 2 weeks. Depressive and anxiety symptom severity were assessed by Children Depressive Inventory (CDI) and Revised Children's Manifest Anxiety Scale (RCMAS) before and at the end of the trial. Drug side effects were evaluated each 2 weeks during study.

Results: 30 patients completed the study (15 patients in each group). statistical analysis did not show any significant differences in gender, age, past medical history, ADHD subtypes and comorbid psychiatric disorders. Within group comparison by repeated measure ANOVA statistical analysis showed significant improvement in ADHD symptoms in all Conners subscale in both groups but no differences were detected between two groups.

Conclusion: Our study showed that Duloxetine may be as effective as Methylphenidate in treatment of ADHD in adolescents.

P01-07

The CoMeCo-Trial: comparison of the efficacy of two methylphenidate preparations for children and adolescents with ADHD in a natural setting

Doepfner, Manfred¹; Ose, Claudia²; Fischer, Roland³; Ammer, Richard³; Scherag, Andre²

¹University of Cologne, Department of Child and Adolescent Psychiatry and, Germany; ²University of Duisburg-Essen, Institute for Medical Informatics, Biometry and Ep, Germany; ³MEDICE, Germany

Objectives: The comparison of the efficacy of Medikinet[®] retard and Concerta[®] (CoMeCo) trial was a multisite, randomised, double-blind, crossover trial which aimed to compare the effects of two different modified release methylphenidate (MPH) preparations (Medikinet[®] retard: 50% immediate release (IR); Concerta[®]: 22% IR) in a natural setting across the day in 113 randomised children and adolescents with ADHD (age range 6;0–17;11 years). The duration of the study per patient was 3 weeks.

Methods: The primary outcome variable was the German version of the “Swanson, Kotkin, Agler, M-Flynn, and Pelham scale”; SKAMP-D) in the first 3 h of school as assessed by teachers.

Results: Medikinet[®] retard in an equivalent daily dose was superior to Concerta[®] (p = 0.0009) and Medikinet[®] retard in the reduced daily dose was non-inferior to Concerta[®] on the primary outcome. Further exploratory analyses on teacher and parent ratings on ADHD and on externalizing symptoms during the day revealed no evidence for the superiority of Concerta[®] on Medikinet[®] retard in an equivalent daily dosage throughout the day.

Conclusion: Children and adolescents may also be treated with a lower daily dose of Medikinet[®] retard (which has a similar IR component as Concerta[®]) without resulting in a clinically relevant worse effect during school time.

P01-08

An open trial of duloxetine in the treatment of adolescents with attention-deficit/hyperactivity disorder

Mahmoudi-Gharaei, Javad¹; Dodangi, Nasrin¹; Tehrani-Doost, Mehdi¹; Faghihi, Toktam²

¹Tehran University of Medical Sciences, Psychiatry Department, Islamic Republic of Iran; ²Tehran University of Medical Sciences, Clinical Pharmacy Department, Islamic Republic of Iran

Background: Non-stimulant medications, including antidepressants have been used as a treatment option in the pharmacotherapy of

attention-deficit/hyperactivity disorder (ADHD) in children and adolescents.

Aim: To evaluate the effectiveness and tolerability of duloxetine, a serotonin and norepinephrine reuptake inhibitor, in the therapy of youth with ADHD.

Materials and methods: In a 6-week open-label trial, adolescents aged 11–18 years diagnosed with ADHD were enrolled. After a wash out period of 2 weeks, participants were given duloxetine 30 mg/day in the first week, and 60 mg/day from week 2 to the end of study. Conners' Parent Rating Scale-Revised (CPRS-R) short form was used to assess efficacy of therapy. The Revised Children's Manifest Anxiety Scale (RCMAS) and the Children's Depression Inventory (CDI) were applied to assess anxiety symptoms and depressive symptoms, respectively. CPRS-R was performed at baseline, every 2 weeks and at the end of trial. RCMAS and CDI were tested at baseline and at the end of trial.

Results: Thirteen participants completed the study. A significant reduction in ADHD symptoms measured by CPRS-R was observed. Also, the decrease was significant in all four symptom domains of inattention, oppositionality, hyperactivity and ADHD index. Anxiety and depressive symptoms did not change significantly at the end of trial. Duloxetine was generally well tolerated. Decreased appetite, dry mouth, nausea, headache and insomnia were the most common observed side effects.

Conclusion: The results of this open-label study suggest the effectiveness of duloxetine in the treatment of ADHD in adolescents. Duloxetine therapy was effective in all symptom domains of ADHD, and the effect seemed to be independent of the drugs anti-anxiety and anti-depressant properties. Further controlled studies, with larger sample size are required to assess the efficacy of duloxetine in children and adolescents with ADHD.

P01-09

An open trial of duloxetine in the treatment of adolescents with attention-deficit/hyperactivity disorder

Mahmoudi-Gharaei, Javad¹; Dodangi, Nasrin¹; Tehrani-Doost, Mehdi¹; Faghihi, Toktam²

¹Tehran University of Medical Sciences, Psychiatry, Islamic Republic of Iran; ²Tehran University of Medical Sciences, Clinical Pharmacy, Islamic Republic of Iran

Background: Non-stimulant medications, including antidepressants have been used as a treatment option in the pharmacotherapy of attention-deficit/hyperactivity disorder (ADHD) in children and adolescents.

Aim: To evaluate the effectiveness and tolerability of duloxetine, a serotonin and norepinephrine reuptake inhibitor, in the therapy of youth with ADHD.

Materials and methods: In a 6-week open-label trial, adolescents aged 11–18 years diagnosed with ADHD were enrolled. After a wash out period of 2 weeks, participants were given duloxetine 30 mg/day in the first week, and 60 mg/day from week 2 to the end of study. Conners' Parent Rating Scale-Revised (CPRS-R) short form was used to assess efficacy of therapy. The Revised Children's Manifest Anxiety Scale (RCMAS) and the Children's Depression Inventory (CDI) were applied to assess anxiety symptoms and depressive symptoms, respectively. CPRS-R was performed at baseline, every 2 weeks and at the end of trial. RCMAS and CDI were tested at baseline and at the end of trial.

Results: Thirteen participants completed the study. A significant reduction in ADHD symptoms measured by CPRS-R was observed. Also, the decrease was significant in all four symptom domains of inattention, oppositionality, hyperactivity and ADHD index. Anxiety and depressive symptoms did not change significantly at the end of trial. Duloxetine was generally well tolerated. Decreased appetite, dry mouth, nausea, headache and insomnia were the most common observed side effects.

Conclusion: The results of this open-label study suggest the effectiveness of duloxetine in the treatment of ADHD in adolescents. Duloxetine therapy was effective in all symptom domains of ADHD, and the effect seemed to be independent of the drugs anti-anxiety and anti-depressant properties. Further controlled studies, with larger sample size are required to assess the efficacy of duloxetine in children and adolescents with ADHD.

P01-10

Long-term safety of lisdexamfetamine dimesylate (LDX) in adolescents with attention-deficit/hyperactivity disorder

Findling, R¹; Childress, A²; Cutler, A³; Hamdani, M⁴; Ferreira-Cornwell, MC⁵; Shaw, M⁶; Gasior, M⁴

¹Case Western Reserve University, Cleveland, OH, University Hospitals Case Medical Center, USA; ²Center for Psychiatry and Behavioral Medicine, Las Vegas, NV, USA; ³Florida Clinical Research Center, LLC, Bradenton, FL, USA; ⁴Shire Development Inc., Wayne, PA, USA; ⁵Shire Development Inc, Wayne, PA, USA; ⁶Shire Pharmaceuticals, Basingstoke, UK

Background: LDX, a prodrug stimulant approved in Canada and the USA for treatment of ADHD, is now under evaluation for use in children and adolescents in Europe.

Aims: To assess short- and long-term safety of LDX and its efficacy in adolescents with ADHD.

Methods: Eligible participants (13–17 years) with at least moderately symptomatic ADHD were randomized to LDX or placebo in a 4-week, forced-dose, double-blind study. Efficacy measures included ADHD-RS-IV total score (primary) and CGI-I scale (secondary). In an open-label extension, eligible patients continued treatment for about 48 weeks. Safety assessments in both studies included treatment-emergent adverse events (TEAEs), vital signs and ECGs.

Results: Of 314 patients randomized in the core study, 309 were included in efficacy analyses. The most frequently reported TEAEs with all LDX doses were decreased appetite (33.9%), headache (14.6%), insomnia (11.2%), weight decrease (9.4%) and irritability (6.9%); 4 subjects on LDX experienced 6 severe TEAEs: insomnia (n = 2), irritability, mood swings, headache and decreased appetite. In the extension study (269 enrolled), 265 patients were assessed for efficacy and safety. Most common TEAEs were mild to moderate and included upper respiratory tract infection (21.9%), decreased appetite (21.1%), headache (20.8%), weight decrease (16.2%), irritability (12.5%) and insomnia (12.1%); 10 participants reported 15 severe AEs, including syncope/vasovagal syncope (n = 4) and aggression (n = 2). At endpoint, mean (SD) ADHD-RS-IV total score fell 26.2 (9.75) from baseline (p < 0.001), and 87.2% of patients were much or very much improved on the CGI-I. In both studies, modest mean increases in pulse and blood pressure, but no clinically meaningful ECG trends, were noted with LDX.

Conclusions: LDX exhibited short- and long-term safety profiles consistent with previous studies and was effective in improving core

ADHD symptoms in adolescents. Supported by funding from Shire Development Inc.

P01-11

Family functioning and its relation with children's emotional behavioral problems in attention deficit hyperactivity disorder in Turkey

Gökçe Ýmren, Sebla; Arman, Ayşe; Berkem, Meral

Marmara University School of Medicine, Child and Adolescent Psychiatry, Turkey

Objectives: ADHD may disrupt family functioning in many ways. The purpose of the study was to examine family functioning and its relation with emotional behavioral problems in children and adolescents with Attention Deficit and Hyperactivity Disorder (ADHD).

Methods: Fifty children diagnosed with ADHD and forty nine healthy controls (aged 8-15 years) were assessed with Kiddie Schedule for Affective Disorders and Schizophrenia Present and Lifetime Version; Parents completed the Child Behavior Checklist (CBCL) 4–18 for their children's emotional and behavioral problems; the McMaster Family Assessment Device (FAD) for family functioning which assesses 6 dimensions of family functioning (problem solving, communication, behavior control, affective involvement, affective responsiveness, and roles and also includes a general functioning subscale).

Results: 34% of the ADHD children had comorbid psychiatric disorders. Mean age and gender between ADHD and control groups were similar. ADHD families scored high at the level of "unhealthy functioning" in the problem solving, roles, affective involvement, general functioning, and behavior control subscales of FAD. Besides, problem solving behaviour and general functioning were significantly poorer than control families and they had more difficulties in area of roles. The scores in problem solving, roles, affective responsiveness, behavior control subscale of FAD were significantly correlated with the scores of internalizing behaviors subscales of CBCL in ADHD group.

Conclusion: In this study the families of ADHD children had poorer family functioning in most of the subscales of FAD. These problematic functions are related with children's internalizing problems. The treatment of children diagnosed with ADHD should include parental treatment and intervention addressing parental skills.

P01-12

ADHD symptoms, emotional behavioral problems and psychopathology in siblings of ADHD children

Gökçe Ýmren, Sebla¹; Arman, Ayşe¹; Yula, Yasemin²; Kalaça, Sibel³; Berkem, Meral⁴

¹Marmara University School of Medicine, Child and Adolescent Psychiatry, Turkey; ²Tekirdağ State Hospital, Child and Adolescent Psychiatry, Turkey; ³Marmara University School of Medicine, Public Health, Turkey; ⁴Marmara University School of Medicine, Turkey

Background: Attention Deficit Hyperactivity Disorder (ADHD) is the most common and highly heritable disorder in the field of child psychiatry. Beside the genetic background, the siblings of ADHD children are at increased risk for developing psychopathology because of the negative effects of this chronic disorder on the family unit.

Objective: In this study, it was aimed to compare psychopathology, the symptoms of ADHD, and emotional-behavioral difficulties in siblings of ADHD (ADHD-sibs) children with siblings of children without any psychiatric diagnosis.

Methods: The siblings aged between 8 and 17 of randomly selected ADHD children were included in the study (n:50). The results were compared with siblings of healthy controls (CONTsibs) who matched with ADHD-sibs in terms of age and gender (n:48). Clinical assessments were made with Kiddie Schedule for Affective Disorders and Schizophrenia Present and Lifetime Version; ADHD symptoms were measured with DSM-IV ADHD Symptom Checklist based on parent and teacher report, Conners' Parent Rating Scale, and Conners' Teacher Rating Scale; emotional and behavioral problems were measured with Child Behavior Checklist for 4–18 years (CBCL), the Screen for Child Anxiety Related Emotional Disorders (SCARED) with both parent and child report, and childhood depression scale based on self-report; adverse life events were assessed with a detailed list.

Results: According to the findings, ADHD-sibs were found out to have less academic success; the diagnosis of ADHD, enuresis and anxiety disorder were more common and they had more ADHD symptoms, emotional and behavioral problems compared to CONT-sibs. Maternal education level was related with the presence of psychiatric disorder in ADHD-sibs.

Conclusion: ADHD-sibs should be evaluated closely for early diagnosis and possible interventions because they have increased risk of psychopathology and emotional behavioral problems whose symptoms may not be recognized by parents.

P01-13

Gene expression profile in brains of prenatal-stressed mice

Gruenblatt, Edna¹; Bielas, Hannes¹; Arck, Petra²; Walitza, Susanne¹

¹University of Zurich, Department of Child and Adolescent Psychiatry, Switzerland; ²Charité, Campus Virchow Klinikum, Berlin, Department of Pediatrics, Division of Pneumology and Immunology, Germany

Introduction: The influence of prenatal stress is widely discussed not only for embryonic development, but also for its effect on personality and psychiatric disorders in later life of the offspring, such as schizophrenia, attention deficit hyperactivity disorder (ADHD), anxiety or depression.

Aim: We aimed to investigate alterations in different brain regions and gender gene expression in adult murine offspring upon prenatal stress challenge. Such results would reveal regional susceptibility to stress, as well as gender effects.

Methods: Brains from prenatally stressed male and female BALB/c offspring were compared to brains from non-stressed BALB/c mice. Gene expression of seven genes were analysed in the amygdala, brain-stem, cerebellum, cortex, hippocampus, hypothalamus and striatum using quantitative-real-time RT-PCR method.

Results: We observed the highest expression of FOS1 in the cerebellum, amygdala and cortex while of serotonin transporter (SERT) mRNA in the brain stem compared to the other brain regions. Prenatal stress induced significant increase in FOS1 expression compared to the non-stressed mice; this alteration was observed especially in male mice particularly in the amygdala, hippocampus and striatum. On the other hand, SERT expression decreased significantly in the hippocampus of prenatal stressed female mice.

Discussion: These novel insights reveal the regulatory effect of SERT on gender-dependent anxiety disorders. Brain expression of

FOS1, an early-immediate transcription factor gene, may be indicative for impaired stress response and learning upon prenatal stress, which differ between genders. Based on this promising pilot study, additional investigations are following.

P01-14

Birth month as a risk factor for ADHD in Sweden

Halldner Henriksson, Linda

Karolinska Institutet and the Division of Child and Adolescent Psychiatry in Stockholm County, Department Medical Epidemiology and Biostatistics, Kind, Sweden

Aim: It was recently reported that US children born the month before the cutoff date for school eligibility (i.e. the youngest in their classes) are more likely to be diagnosed with ADHD and are prescribed ADHD drugs at a higher rate than children born the month after the cutoff date. We wanted to examine the effect of birth month as a risk factor for ADHD-diagnosis and treatment in Sweden.

Materials and methods: Using the Swedish Prescribed Drug Registry we identified individuals prescribed amphetamine, dexamphetamine, methylphenidate or atomoxetine, which are drugs that are fairly specific for ADHD-treatment. In a nested case–control design and by means of a logistic regression model analysis we compared cases with residents of the Swedish population matched by sex and birth year.

Results: We found that children born in the end of the year were more likely to be prescribed ADHD drugs than were children born in the beginning of the year (born in December versus born in January: odds ratio (OR) 1.46 (95% confidence interval (CI) 1.33–1.59), and OR 1.39 (CI 1.29–1.48) for children aged 6–12 years and 12–18 years, respectively). The higher prescription rate for individuals born late in the year was not as pronounced for young adults aged 18–24 years (born in December vs. born in January: OR 1.13 (CI 1.02–1.25)) or for adults aged 24–35 years (OR 1.14 (CI 1.02–1.27)).

Conclusion: In Sweden the cutoff date for school eligibility is December 31st. Therefore the results of our analysis would support the hypothesis that children are diagnosed with and treated for ADHD partly because of school immaturity.

P01-15

Psychiatric comorbidity in children and adolescents with attention deficit hyperactivity disorder: a clinic sample from Turkey

Herguner, Arzu; Herguner, Sabri; Cicek, Erdinc

Selcuk University, Meram Faculty of Medicine, Department of Child and Adolescent Psychiatry, Turkey

Introduction: It is well known that more than half of individuals with attention deficit hyperactivity disorder (ADHD) have comorbid psychiatric disorders. There is increasing evidence that co-occurring psychiatric disorders affect the manifestation and severity of symptoms, long-term prognosis and treatment response. The aim of this study was to investigate the comorbid psychopathology in clinic-referred children and adolescents with ADHD.

Methods: The study group included 133 children and adolescents who had been referred to the Department of Child and Adolescent Psychiatry, Meram Faculty of Medicine, Selcuk University. All of the

cases were diagnosed as ADHD according to DSM-criteria. Psychiatric assessment was done by using a standardized diagnostic instrument, Kiddie-Schedule for Affective Disorders and Schizophrenia-Present and Lifetime Version (K-SADS-PL).

Results: Among 133 participants, 81 (60.9%) subjects were diagnosed with combined-type, 48 (36.1%) were the predominantly inattentive type, only 4 (3.0%) was determined to have the predominantly hyperactive-impulsive type. Ninety-eight (73.7%) subjects had at least one comorbid disorder. The most common psychiatric disorders were disruptive behavior disorders and anxiety disorder. Correlation analysis revealed that there was a significant relation between age and number of diagnosis.

Discussion: The results of this study confirm that children and adolescents with ADHD have a very high rate of psychiatric comorbidity as it was shown in previous studies. Psychiatric assessment should be done in cases with ADHD.

P01-16

Aripiprazole in children with attention deficit/hyperactivity disorder resistant to conventional treatments: preliminary long-term results

Herreros, Oscar¹; Rubio-Morell, Belen²; Monzon, Josue²; Gastaminza, Xavier³

¹Hospital San Agustin de Linares, UGC Salud Mental, Spain;

²Hospital Universitario de Canarias, Spain; ³Unidad de Paidopsiquiatria Psicomatica del Hospital Vall d'Hebron de Barcelona, Spain

Background: Data about the use of aripiprazole in children suggest that it might be safe and well tolerated. Findling et al. (1) have studied its short-term effectiveness and cognitive effects in ADHD children, obtaining clinical improvement without negative impact on cognition. These findings support investigation into its long-term effectiveness.

Aim: To evaluate long-term effectiveness and tolerability of aripiprazole in children with primary ADHD and non-responders or intolerants with psychostimulants and atomoxetine.

Materials and methods: A treatment protocol was initiated in our Child and Adolescent Psychiatry Unit using aripiprazole for ADHD children with poor response or intolerance to methylphenidate and atomoxetine. We present data from children treated 1 year or more, plus intolerants and non-responders. Outcome results were measured with the ADHD Rating Scale IV-parent version (investigator scored). Adverse events were rated through clinical interviews.

Results: Data were obtained from 17 children diagnosed with ADHD-combined type that had completed 1 year with aripiprazole as treatment for ADHD. Patients whose treatment was retired because of inefficacy or adverse events were included. Results showed significant improvement on ADHD symptoms, measured with the ADHD-RS-IV (inattention and hyperactivity-impulsivity subscales, and global score). The most frequently reported adverse events were sedation, nausea and headache.

Conclusion: The results suggest the efficacy, safety and tolerability of aripiprazole in ADHD children. It seems to have a long-term efficiency in ADHD patients with a poor response to conventional treatments. If further trials confirm these results, aripiprazole could represent an alternative for patients who fail to respond to standard pharmacological interventions.

Reference:

1. Findling RL, Short EJ, Leskovec T et al (2008) Aripiprazole in children with attention-deficit/hyperactivity disorder. *J Child Adolesc Psychopharmacol* 18:347–354.

P01-17 Individualised methylphenidate therapy based on pharmacogenomics: focus on carboxylesterase1 (CES1)

Houmann, Tine¹; Skovgaard, Anne Mette¹; Rasmussen, Henrik Berg²

¹Child- and Adolescent Psychiatric University Centre Glostrup, Faculty of Health Sciences, University of Copenhagen, Denmark; ²Research Institute of Biological Psychiatry, Mental Health Centre Sct. Hans, Copenhagen University Hospitals, Denmark

Background: Great individual variations in response to methylphenidate (MPH) treatment for ADHD, are a well recognized clinical phenomenon. Adverse reactions are common, often mild and temporary, but some are chronic and/or serious leading to discontinuation of treatment, and guidelines for treatment with methylphenidate emphasize the need for individually tailored medication dosage (Graham J et al 2011; AACAP 2007). These variations can only partly be explained by age at treatment initiation and comorbidity. CES1 is a key enzyme in the metabolism of methylphenidate. We hypothesise that CES1 gene variants have an effect on enzyme activity and metabolism of MPH, and that guidelines for individualised MPH therapy can be established. The study is part of the multicenter study INDICES: consisting of several work-packages, with focus on carboxylesterase1 (CES1), that combine pharmacological, genetic and metabolomic sciences to improve pharmacotherapy.

Aims: To examine the relationship of CES1 genotype with the response to MPH in children with ADHD, and develop guidelines for CES1 genotype-based prescriptions of MPH for treatment of ADHD in children.

Methods: Assessment of ADHD symptom severity and adverse reactions in 200 drug naïve children with ADHD, at baseline, during drug titration and at symptom normalisation or treatment failure. CES1 genotypes will be correlated with number of weeks in treatment to symptom—normalisation or treatment failure, occurrence of adverse reactions, and possible discontinuation of treatment due to these. This will allow us to assess whether MPH dosage should be increased in some patients, and decreased in others. By combining data from the pharmacokinetic work-package in the study, we will develop guidelines for individualised therapy of ADHD with MPH.

Results: The study design, theoretical background and hypotheses will be presented on the poster. The INDICES study starts up in 2011

Funding: The Danish Council for Strategic Research.

P01-18 Use of ball blanket in attention deficit hyperactivity disorder sleeping problems

Hvolby, Allan¹; Bilenberg, Niels²

¹Psychiatry of Region of Southern Denmark, Child and adolescent psychiatric Department, ESBJ, Denmark; ²Psychiatry of Region of Southern Denmark, Child and adolescent psychiatric Department, Odense, Denmark

Introduction: Sleep deprivation in children with ADHD is a common reported complain. We know that sleep difficulties with no explanatory cause can be mistaken for ADHD, and that the kind of symptoms observed in primary sleep disorders—such as sleep-related breathing disorders—can often be mistaken for ADHD as they are very similar to core symptoms of ADHD.

Objectives: Based on actigraphic surveillance, ADHD symptom rating and sleep diary, this study will evaluate the effect of ball blanket on sleep for a sample of 8–13 years old children with ADHD

Design: Case–control study.

Setting: A child and adolescent psychiatric department of a teaching hospital.

Participants: 21 children aged 8–13 years with a diagnosis of ADHD and 21 healthy control subjects.

Intervention: Sleep was monitored by parent-completed sleep diaries and 28 nights of actigraphy. For 14 of those days, the child slept with a ball blanket.

Results: The time it takes to fall asleep when using the ball blanket is shortened and found to be at the same level as the healthy control subjects. Furthermore, we found that the use of ball blankets significantly reduced the number of nights that the ADHD child spends more than 30 min falling asleep from 19 to 0%. Teacher rating of symptoms showed an improvement in both activity levels and attention span of approx. 10% after using the ball blankets.

Discussion/conclusions: Use of ball blankets is a relevant and effective treatment method with regard to minimising sleep onset latency. We found that the use of Ball Blankets for 14 days improved not only sleep onset problems but also improved the daytime functioning in children with ADHD.

P01-19 The personality characteristics of adult ADHD

Hwang, Soon-taeg; Jo, Nam-Kyeong; Oh, Hye-Ji; Song, Hye-Min

Chungbuk National University, Department of Psychology, Korea

The purpose of this study was to confirm personality characteristics in adult ADHD tendency. The Conners Adult ADHD Rating Scale Korean version (CAARS-K), Barkley childhood ADHD Rating Scale and Korean Temperament and Character Inventory-Revised Short (TCI-RS) for adults and Korean Adolescent Personality inventory-HPR (KAPI-HPR) and Korean Junior Temperament and Character Inventory 12–18 (JTIC 12–18) for adolescence were carried out to 768 persons (Adults 359 and Adolescence 409). As a result of correlation analysis between ADHD tendency and temperament and character, positive relation was found in novelty-seeking, harm-avoidance, reward-dependence, persistence and self-directedness, while negative relation was shown in self-directedness and cooperativeness for adult ADHD. On the other hand, for adolescence ADHD, positive relation was shown in novelty-seeking and negative relation was shown in self-directiveness. T test was carried out to figure out the differences of temperament and character between adult ADHD and adolescence ADHD. As a result, adult ADHD tendency group showed a meaningfully higher rate in novelty-seeking, harm-avoidance and self-transcendence than control group, while control group had a higher rate in self-directedness and cooperativeness. Between adult ADHD and adolescence ADHD, adult ADHD tendency group had a statistically meaningful difference in novelty-seeking, harm-avoidance, reward-dependence, persistence, self-directedness and cooperativeness. Finally, temperature and character was examined by classifying subtypes of adult ADHD through multiple regression analysis. For ADHD-I, it appeared to contribute to novelty-seeking, harm avoidance meaningfully. ADHD-H had a meaningful difference in novelty-seeking, reward-dependence, cooperativeness and self-transcendence, whereas ADHD-C showed a meaningful difference in novelty-seeking, cooperativeness and self-transcendence.

P01-20**Attention deficit hyperactivity disorder: agreement between clinical impression and SNAP-IV screening tool**

Jose Angel, Alda Díez¹; Serrano, Eduardo²

¹Hospital Sant Joan de Déu, Barcelona, España, Servicio de Psiquiatría y Psicología, Unidad de TDAH, Spain; ²Hospital Sant Joan de Déu Barcelona, Spain

Introduction: Attention deficit hyperactivity disorder (ADHD) is the most common childhood-onset neuro-behavioural disease. There are no definitive methods to diagnose pediatric ADHD. Symptoms of ADHD persist into adolescence in approximately 80% of children, and they may even continue into adulthood. Adult ADHD is underdiagnosed in Spain.

Objective: The CONCOR study was undertaken to assess the usefulness and accuracy of the SNAP-IV screening tool, which is completed by the parents, and this was compared with the pediatricians' clinical impression regarding the presence of ADHD in Spanish children that they were treating.

Methods: Multicentre, case-controlled, cross-sectional study. Exclusion criteria included health professionals other than physicians and specialties other than pediatrics.

Results: 1169 physicians were included in the study, providing results from 7263 children. There was good concordance between SNAP-IV and the pediatricians impression of ADHD (kappa concordance index 0.6471; 95% confidence intervals 0.6296, 0.6646), and SNAP-IV showed good sensitivity and specificity (82.3 and 82.4%, respectively). The negative predictive values of SNAP-IV were 97.7–99.3% for an ADHD prevalence of 3–10%, with positive predictive values of 12.6–34.2%. Thus, the SNAP-IV questionnaire appears to be a useful screening tool which would allow early identification of children who are unlikely to have ADHD, bringing those in whom there is a possibility of ADHD to the attention of the pediatrician for clinical evaluation.

Discussion: The SNAP-IV screening tool effectively identified Spanish children with a low potential for the presence of ADHD, i.e. it had good concordance with the pediatricians' clinical impression of the presence/absence of ADHD according to DSM-IV (kappa index 0.6646, with narrow CIs), and a high NPV (>90%). Diagnosis of ADHD during childhood, facilitated by the SNAP-IV screening tool, may also help reduce the incidence of undiagnosed adult ADHD.

P01-21**Motor problems in children with attention deficit hyperactivity disorder**

Kesic, Ana¹; Lakic, Aneta²

¹Clinic for Neurology and Psychiatry for Children and Adolescents, Psychiatry, Serbia; ²Medical School, University of Belgrade, Clinic of Neurology and Psychiatry for Children and Youth, Psychiatry, Serbia

Introduction: Attention deficit hyperactivity disorder (ADHD) is often accompanied by motor problems. However, they are not in first ADHD therapeutical plane, although have a significant impact on children everyday functioning.

Aim: (a) description of motor problems in our patients with ADHD; (b) comparison of teachers, parents and physicians assessment for presence of motor problems in children with ADHD.

Subjects: 30 children aged 5 to 15 with ADHD. All children have IQ > 70, and do not suffer from diagnosed neurological disorder, epilepsy, known genetic syndromes or autism.

Methods: DSM-IV R, psychological tests (Wechsler scale), neurologic, psychiatric and pediatric check up, blood and urine laboratory tests, urine metabolic screening electroencephalography, SNAP-IV rating scale for ADHD (Parent + Teacher), clinical interview, Developmental coordinator Disorder Questionnaire (DCD-Q), Behavioral Activity Rating Scale (BARNS), Abnormal Involuntary Movement Scale (AIMS).

Results: In 30% of examined children neurological check up shows presence of the "soft" neurological signs, previously called as a "clumsy child syndrome". About half children (predominantly boys) rated as motor impaired by their parents and teachers. Behavioral factors play a role in referral.

Conclusion: Motor problems in children with ADHD exists and need clinical attention in sense of recognition and primarily for the specific treatment.

Keywords: Hyperactivity, attention deficit, children, motor problems

P01-22**Effect of environmental lead exposure on attention-deficit/hyperactivity disorder in school-aged children**

Kim, Hyo Jin¹; Park, Min Hyeon¹; Hong, Soon Beom¹; Kim, Jae Won¹; Hong, Yun Chul²; Kim, Bung Nyun¹; Shin, Min Sup¹; Yoo, Hee Jeong³; Cho, Soo Chul¹

¹Seoul National University Hospital, Republic of Korea; ²Seoul National University college of Medicine, Republic of Korea; ³Seoul National University Bundang hospital, Republic of Korea

Objectives: The aim of this study was to examine the association of lead in blood with signs and symptoms of attention-deficit/hyperactivity disorder (ADHD) in Korean children.

Methods: Children underwent a standardized Korean version of a computerized continuous performance test called ADHD Diagnostic System (ADS). Parents and school teachers of the participating children administered ADHD Rating Scale (ARS) to evaluate symptoms of ADHD in our subjects. The intelligence quotients (IQs) of the children and their mothers were also determined. Blood lead levels were cross-sectionally measured in our child participants. Multiple linear regressions analyses were performed to assess whether scores of the ADS or ARS were predicted by blood lead level when age, gender, residential region, paternal education level, and the IQ of the child were adjusted.

Results: A total of 1,089 children, aged 8–11 years, participated in our study. The mean age of subjects was 9.05–0.7 years (aged 8–11 years). 571 (52.4%) were boys and 518 (47.6%) were girls. The blood lead concentration predicted the scores of the ADS as well as the parental and the teacher ARS rating scores. Commission errors and the standard deviations of the correct response times were the two major variables of ADS predicted by blood lead concentration ($\beta = 0.076$, $p = 0.022$; $\beta = 0.078$, $p = 0.022$, respectively). In addition, both the parent- and teacher-rated ARS subscores of hyperactivity-impulsivity, but not of inattention, were predicted by the lead level ($\beta = 0.086$, $p = 0.008$; $\beta = 0.096$, $p = 0.003$, respectively).

Conclusions: The results of our study suggest that lead exposure is associated with ADHD in school-aged children, and more specifically, with symptoms of hyperactivity-impulsivity rather than inattention.

P01-23

Characteristics of patients with ADHD in psychiatric and pediatric ADHD clinics

Kolar, Dusan¹; Hechtman, Lily²; Francoeur, Emmett³; Paterson, Jodi⁴

¹Institute of Neurology and Psychiatry for Children and Adolescents, Belgrade, Serbia; ²Department of Psychiatry, Montreal Children's Hospital, McGill University, Canada; ³Department of Pediatrics, MCH, McGill University, Canada; ⁴Pediatric ADHD Clinic, Montreal Children's Hospital, Canada

Background: Variety of clinicians are engaged in the treatment of children with ADHD, but most frequently they are treated by child psychiatrists and pediatricians. This study explores whether the child psychiatry ADHD clinic and the pediatric ADHD clinic serve different population of patients regarding the patient characteristics, severity of ADHD symptoms and comorbid disorders.

Methods: Charts of 163 children and adolescents treated in two clinical settings—the child psychiatry ADHD clinic and the pediatric ADHD clinic at the Montreal Children's Hospital—were analyzed with regards to demographic characteristics, family structure, DSM-IV diagnosis of ADHD, and a variety of comorbid characteristics assessed through the Child Symptom Inventory-4 or Adolescent Symptom Inventory-4.

Results: Patients in the child psychiatry ADHD clinic were older and consequently have more years of schooling. According to parent and teacher ratings the child psychiatry ADHD clinic had a greater number of patients with inattentive and hyperactive/impulsive symptoms of ADHD as well as more patients with combined subtype of ADHD than the pediatric ADHD clinic. Likewise, the child psychiatry clinic had a higher number of patients with oppositional defiant disorder, separation anxiety disorder, dysthymia, and vocal tics. Concerning the agreement between parent and teacher ratings on the Child/Adolescent Symptom Inventory we found the high level of agreements on oppositional defiant disorder, social phobia, and substance use disorders. There was a trend of agreement in the diagnoses of generalized anxiety disorder and specific phobia.

Conclusion: The child psychiatry ADHD clinic received patients who were older, had more severe symptoms of ADHD, and had more patients with comorbid psychiatric disorders. The study suggests that the triage system that was established worked well.

Keywords: ADHD, Comorbidity, Children, ADHD Clinics, Rating scales.

P01-24

Sustained release methylphenidate (OROS formulation) in therapy of hyperactivity and attention deficit in children with mental retardation

Lakic, Aneta¹; Kesic, Ana²

¹Medical School, University of Belgrade, Clinic of Neurology and Psychiatry for Children and Youth, Psychiatry, Serbia; ²Clinic for Neurology and Psychiatry for Children and Adolescents, Psychiatry, Serbia

Introduction: Hyperactivity and attention deficit are often disturbing factor in working with children who are mentally retarded (mild mental retardation, moderate mental retardation). Methylphenidate products are the first choice in the treatment of ADHD, whose primary behavioral event is attention deficit and hyperactivity. In this context, the use of preparations of methylphenidate in children with mental retardation seems like a logical choice (especially in relation to current therapeutic approaches in which the use of neuroleptics was the first place).

Aim: Assessment of treatment effects of sustained release methylphenidate in mental children with mental retardation.

Subjects: 15 children with MR (mild MR, moderate MR) age 7–15 years, with diminishing intellectual functioning as only clinical manifestation. Cause of mental retardation is unknown.

Methods: DSM-IV R, psychological tests (Wechsler scale), neurologic, psychiatric and pediatric check up, blood and urine laboratory tests, urine metabolic screening, electroencephalography, SNAP-IV rating scale for ADHD.

Methodology: 6 month follow-up treatment effects of sustained release methylphenidate.

Results: Application of sustained release methylphenidate in children with MR have shown that most of these children was a significant (statistically significant) improvement of behavior primarily in terms of reducing hyperactivity.

Conclusion: Reasons for this results may be contained in the, presumed involvement of different structures and mechanisms that provide a clinical picture of MR and comorbidity of MR and/or ADHD.

Keywords: Hyperactivity, attention deficit, children, mental retardation.

P01-25

Subthreshold ADHD and disruptive behavior diagnoses in teenagers; associations with other psychiatric problems in the Kiddie SADS: PL questionnaire

Malmberg, Kerstin¹; Edbom, Tobias¹; Wargelius, Hanna²; Larsson, Jan-Olov¹

¹Karolinska Institutet, Women's and Children's Health, Sweden;

²Uppsala University, Neuroscience, Pharmacology, Sweden

Objective: To study how subthreshold diagnoses of attention deficit hyperactivity disorder (ADHD) and disruptive behavior disorders (DBD) symptoms are related to symptoms of child and adolescent psychiatric disorders and risk behaviors of smoking, alcohol use and drug use.

Methods: A population based sample of twins including 177 girls and 135 boys were interviewed with the Swedish version of Kiddie-SADS Present and Lifetime Version (K-SADS-PL) and the odds ratio (OR) for the screening question was calculated. The symptoms of attention-deficit/hyperactivity disorder (ADHD) combined and DBD were according to DSM-IV when the symptom was assessed as "possible" or "certain" due to the K-SADS interview and subthreshold diagnoses was compiled.

Results: Significant OR were associated with subthreshold diagnoses for ADHD combined and DBD for symptoms of depression, mania panic attacks, phobias, anorexia nervosa, motor tics posttraumatic stress disorder (PTSD) for girls and in boys there were significant OR for symptoms of depression and posttraumatic stress disorder. The OR for both subthreshold diagnoses of ADHD_comb and DBD symptoms were also significant for smoking and a high consumption of alcohol for both boys and girls. Similar associations were found concerning

the frequency of drinking. Often parents did not know about their children's drug habits.

P01-26

Inattention, hyperactivity and impulsivity as factors in children of academic unsuccess

Martsenkovsky, Igor¹; Martsenkovska, Inna²

¹Ukrainian Research Institute of Social, Forensic Psychiatry and Drug Abuse, Medical and Social Problem of Psychiatric Disorder, Ukraine; ²Ukrainian Research Institute of Social and Forensic Psychiatry and Drug Abuse, Child Psychiatry and Medical-Social Rehabilitation, Ukraine

Background: When a child with ADHD reaches school age there are a number of issues which need to be taken into consideration so that they are allowed to reach their full potential.

Aims: The aims of this study was to investigate the prevalence of ADHD in school children and academic success of students with different subtypes of this, oppositional defiant (ODD) and conduct (CD) disorders.

Materials and methods: Were examined 646 school-age children: 482 students (218 boys, 264 girls) in a secondary school and 164 pupils (120 boys, 44 girls) at a special school for children with learning disabilities (LD). The investigation included: (1) screening of parents through the CSI-4, CBCL and Connor's Parent Rating Scale, (2) screening of teachers with scales NICHQ Vanderbilt and Connor's Teacher Rating Scale.

Results: It was found that ADHD at the Kiev's schoolchildren is more common than in Europe and the USA: the 12.2% of children in secondary school and a 27.4% in special school. It was establish gender differences: the accumulation in special school ADHD boys with hyperactivity and impulsivity (ADHD-H/Im) and girls with inattention (ADHD-I). 31.7% of schoolchildren with ADHD had comorbid ODD and 39.4%—CD. 31.0% students with ADHD had LD. Disorders of the school skills (writing, reading, calculating) and motor functions, especially fine motility are found in children with ADHD in 3–5 occasions more often than usual. In children with ADHD-H/Im, along with academic problems, there have been more severe disruptions of school adaptation than in children with ADHD-I and students without ADHD.

Conclusions: It is concluded that public schools integrate children with poorly ADHD. Special schools for children with learning disabilities provide better conditions for the integration of children with ADHD, which leads to the accumulation of these boys with hyperactivity and impulsivity. LD can mimic the symptoms of ADHD. Students with ADHD should always be screened for LD.

P01-27

Atomoxetine for the treatment of attention-deficit/hyperactivity disorder symptoms in children with different cognitive abilities

Mazzone, Luigi¹; Reale, Laura²; Mannino, Valeria²; Guarnera, Manuela²; Vitiello, Benedetto³

¹University of Catania, Pediatrics, Italy; ²University of Catania, Italy; ³National Institute of Mental Health, USA

Objectives: The efficacy of atomoxetine in the treatment of attention deficit/hyperactivity disorder (ADHD) is supported by a number of controlled trials conducted in children with normal cognitive capacity. However, atomoxetine is also commonly used to treat attention deficit/hyperactivity disorder (ADHD) in children with a broad range of cognitive abilities and it is unknown if IQ may act as a moderator of treatment effect also for atomoxetine. We examined the association between level of cognitive functioning and clinical response during treatment with atomoxetine.

Methods: The records of all the children treated with atomoxetine at a university clinic over a 3 year period were examined. A total of 55 clinically referred children and adolescents (age 6–17 years, 53 males) with ADHD were treated with atomoxetine (10–110 mg/day; average 1.28 mg/kg/day) for a period ranging from 2 to 168 weeks. Prior to starting treatment, IQ was assessed on the WISC-III. During treatment, clinical outcome was rated on the Clinical Global Impression Improvement (CGI-I) and Severity (CGI-S) scales.

Results: IQ ranged from 43 to 117 (mean 80.6 + SD 18.6, median 84). IQ and final CGI-I scores were negatively correlated ($r = -0.68$, $p < 0.01$). Children with $IQ < 85$ were less likely to be responders (CGI-I score of 1 or 2) than children with $IQ > 85$ (20.71 vs. 76.9%, $p < 0.01$). None of patients discontinued atomoxetine due to adverse effects, while 20 subjects discontinued it for lack of efficacy.

Conclusions: Atomoxetine appears to be less effective in children with IQ below 85 than in children in the average range of cognitive functioning. This difference is not accounted for by differences in severity of ADHD symptoms, comorbidity, or reduced tolerability to the medication. These findings suggest that, in order to be fully informative, clinical trials of medications for ADHD should include also children functioning in the borderline and cognitive disability range.

P01-28

Neural substrates associated with reward system of ADHD using fMRI

Mizuno, Kei¹; Tomoda, Akemi²; Yoneda, Testuya³; Watanabe, Yasuyoshi⁴

¹RIKEN Center for Molecular Imaging Science, Molecular Probe Dynamics Laboratory, Japan; ²Kumamoto University, Child Development, Japan; ³Kumamoto University, Medical Physics in Advanced Biomedical Science, Japan; ⁴RIKEN Center for Molecular Imaging Science, Japan

Background: Attention deficit hyperactivity disorder (ADHD) has a low motivation for learning and an impairment of reward system such as reward anticipation processing based on the dopaminergic dysfunction. Methylphenidate (MPH) which is a dopamine transporter inhibitor is one of the therapeutic agents in the ADHD patients. However, the effect of MPH on the neural reward system of the ADHD patients is still unclear.

Aim: The aim of study was to investigate the effect of MPH on the neural substrates associated with the reward processing of the ADHD patients using functional magnetic resonance imaging (fMRI).

Materials and methods: A monetary reward task (Izuma et al. 2008) was used in the fMRI experiments to compare neural activations during the monetary reward processing between sex- and age-matched healthy children and ADHD patients before the MPH treatment.

Results: Activation of the striatum during the monetary reward processing of the ADHD patients was lower than that of the healthy children.

Conclusions: Our findings provide evidence of the impairment of reward system in the ADHD patients based on the decrease in activation of the striatum during the monetary reward processing. The striatum is critical for not only reward processing but also academic achievement motivation (Mizuno et al. 2008). Therefore, it is possible that the MPH treatment of the ADHD patients contribute both improvements of the reward processing and academic achievement motivation. We are now performing the follow-up study for evaluating the effect of MPH treatment in the ADHD patients.

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P01-29

The occurrence of psychiatric disorders among CD/ODD, ADHD and comorbid CD/ODD and ADHD diagnosed adolescents in Northern Finland 1986 Birth Cohort

Nordström, Tanja¹; Hurtig, Tuula²; Rodriguez, Alina³; Moilanen, Irma²; Ebeling, Hanna²; Taanila, Anja²

¹University of Oulu, Institute of Health Sciences, Finland; ²University and University Hospital of Oulu, Finland; ³Uppsala University, Sweden

Background: Three very common psychiatric disorders among children and adolescents are Conduct Disorder (CD), Oppositional Defiant Disorder (ODD) and Attention-Deficit Hyperactivity Disorder (ADHD). These disorders are usually associated with other psychiatric disorders.

Aims: To examine if there are differences between CD/ODD, ADHD or the comorbid CD/ODD and ADHD diagnosed adolescents in the occurrence of the psychiatric disorders.

Materials and methods: The Northern Finland Birth Cohort 1986 (NFBC 1986) is a prospective longitudinal study which initially consisted of 9 432 children born between 1st July 1985 and 30th June 1986 in Northern Finland. After exclusions, we included total of 8,998 subjects to analyses. The study population was divided into four groups: those who had been diagnosed (1) with only CD or ODD (n = 121), (2) with only ADHD (n = 96), (3) with both CD/ODD and ADHD (n = 80) and (4) all the rest, including those who had not been diagnosed with any of these three disorders (n = 8701). We used the Kaplan–Meier survival analysis and the Cox regression models to evaluate the differences in the occurrence of other psychiatric disorders between the disorders of our interest.

Results: The proportion of other psychiatric disorders was 59% in CD/ODD group, 12% in ADHD group and 25% in comorbid CD/ODD and ADHD group. All proportions were significantly larger than in the reference group where it was only 5%. The CD/ODD group emerged psychiatric disorders mainly between ages from 11 to 17, ADHD before age 8 and the comorbid group quite evenly ages through 3 to 22. The CD/ODD group had an 18.1-fold HR for other psychiatric disorders, ADHD a 2.3-fold HR and the comorbid group a 5.9-fold HR compared with the reference group.

Conclusions: An adolescent diagnosed with CD/ODD is in a high risk for other psychiatric disorders. There are differences between CD/ODD, ADHD and the comorbid CD/ODD and ADHD in the occurrence of the other psychiatric disorders.

P01-30

Assesment of oxidative stress in children with attention deficit hyperactivity disorder

Altun, Hatice¹; Oztop, Didem²; Akyol, Gulden³; Ozsoy, Saliha⁴

¹Kahramanmaras Obstetrics Gynecology and Child Hospital, Child Psychiatry, Turkey; ²Medical School of Erciyes University, Child Psychiatry, Turkey; ³Medical School of Erciyes University, Biochemistry Department, Turkey; ⁴Medical School of Erciyes University, Psychiatry, Turkey

Objectives: ADHD is principally a genetic disorder; however, environmental and biochemical factors may play role in etiopathogenesis of disease. Little investigation has been performed to evaluate biochemical causes. In the present study, it was aimed to assess role of oxidative stress parameters in etiology of ADHD.

Methods: 30 ADHD patients between 6 and 12 years old without current or previous psychiatric disease history who have been firstly diagnosed and have not launched any medical therapy and 30 healthy children as control enrolled to study. Socio-demographic data sheet, Conners' Teacher Rating Scale, Conners' Parents Rating Scale and, to determine ADHD symptoms for disruptive behavior disorder DSM-IV Based Screening and Rating Scale were completed by teachers and parents of the children. Children both in patient and control group have been assessed with Schedule for Affective Disorders and Schizophrenia for School-Age Children-Present and Lifetime Version (K-SADS-PL) and Wechsler Intelligence Scale for Children Revised (WISC-R) was performed to assess neuropsychological status. Venous blood samples were obtained after 12 h fasting and oxidant levels and anti-oxidant activities were measured.

Findings: No significant difference was found between patient and control group in terms of socio-demographic characteristics, except gender. Among oxidant parameters, malonyldialdehyde (MDA) and 8-hydroxy-2'-deoxyguanosine (8-OHdG) levels were found significantly lower than controls in patient group. No significant difference was found in advanced oxidation protein products (AOPP), an oxidant parameter, and paraoxonase1 (PON1) and thiol, both anti-oxidant parameters, levels between two group.

Conclusion: In present study, nonetheless presence of oxidative in children and adolescents with ADHD has not been supported due to low oxidant parameter and lack of alteration in anti-oxidant activity; it has been considered that further studies were needed in this issue.

P01-31

The associations between α -2A-adrenergic receptor gene polymorphism, neuropsychological performance and white matter connectivity among ADHD children

Park, Min-Hyeon¹; Park, Subin²; Kim, Hyo Jin²; Kim, Jae-Won²; Shin, Min-Sup²; Kim, Boong-Nyun²; Cho, Soo-Churl²

¹Seoul National University, Republic of Korea; ²Seoul National University College of Medicine, Republic of Korea

To establish the relationships between alpha-2A-adrenergic receptor gene (ADRA2A) polymorphism of ADHD children and their neuropsychological performance as well as white matter connectivity by diffusion tensor imaging (DTI). The subjects of our study were unmedicated ADHD children (6–18 years old). Children with mental retardation, genetic disorders, neurological disorders, or past history of brain damage, developmental disorders, schizophrenia, bipolar

disorder, other psychoses, Tourette's disorder, OCD, language disorders, or severe learning disorders were excluded. The children performed neuropsychological tests including CPT, STROOP, CCTT and WCST. The ADRA2A polymorphisms were genotyped as previously described, with slight modifications. Student *t* tests were used to compare results of neuropsychological assessment and white matter connectivity, determined by fractional anisotropy (FA) values, according to the genotype at the ADRA2A MspI. The present study included 53 children with ADHD ($M = 45$, $F = 8$). The genotype frequencies (C/C, C/G, and G/G) at the ADRA2A MspI (rs1800544) were 0.15, 0.38, and 0.47, respectively. These frequencies were under Hardy–Weinberg equilibrium ($p > 0.05$). Children with the C allele (C/C+C/G) at the ADRA2A MspI polymorphism showed lower performance in the response time of CCTT-2 ($p = 0.02$) and preservative responses of WCST ($p = 0.04$), than those with the G/G genotype. Children with the C allele (C/C+C/G) at the ADRA2A MspI polymorphism showed decreased FA values in the right body of corpus callosum compared to those with the G/G genotype, although difference between these two groups was not statistically significant at corrected p -value < 0.05 (corrected p -value 0.6). The results of this study suggest that C allele in ADRA2A MspI polymorphism might be associated with neurocognitive performance and pathophysiology of ADHD.

P01-32

The Italian ADHD National Registry: 3 years of active pharmacovigilance in developmental neuropsychiatry

Peddis, Cristina¹; Esu, Lidia¹; Tronci, Maria Giada¹; Carucci, Sara¹; Panei, Pietro²; Zuddas, Alessandro¹

¹University of Cagliari, Child Neuropsychiatry, Department of Neuroscience, Italy; ²Italian National Institute of Health, Italy

Introduction: In 2007 the Italian Drug Regulatory Agency (AIFA) activated the ADHD National Registry, aimed to collect data on diagnostic procedures, drug schedule (doses and duration), efficacy and side effects of MPH and ATX (pharmacovigilance) and to detect and prevent medication abuse/disuse.

Patients and methods: Patients aged 6–18 years with ADHD treated with ATX or MPH were enrolled. Complete clinical assessment was performed at enrollment and every 6 months; specific adverse events were actively inquired by the investigators, data collected by a centralized electronic CRF.

Results: During the 36 months Register activity 1,815 patients were enrolled, 49.7% prescribed with MPH, 50.3% with ATX. About two thirds of the enrolled patients reported at least an adverse event (781 with ATX, 643 with MPH), but in only 63 patients (52 with ATX) the adverse events was classified as “severe”: dysphoria, suicidal ideation, anorexia, seizures, neurogenic bladder, aphasia, lengthened QT, tachycardia, hypotension. Forty-nine patients discontinued medication (40 ATX), 2 changed from ATX to MPH. Significant differences in the prescription practices were observed among region: in Sardinia 146 patients were enrolled, 119 with MPH, 27 with ATX. Fifty percent of the patients reported at least a mild adverse event, but only in two case (1 with ATX, 1 with MPH) they were reported as “severe”, leading to medication withdrawal.

Discussion: The register was able to verify diagnostic accuracy and patterns of drug prescription establishing accurate benefit/risk balance and ensuring high level of health protection for the population. At National level, MPH and ATX are prescribed in the same percentage of patients. Reports of adverse reactions and rate of early withdrawn were significantly higher for ATX than for MPH.

Conclusion: The register may serve as model for pharmacovigilance in others psychiatric disorders in children and adolescents.

P01-33

Impact on online gaming on attention deficit hyperactivity disorder: a case series

Perera, Senerath

Southend University Hospital, Essex, Paediatrics, UK

Aim: To share the experience of three case studies which have led to further study of the impact of online gaming on ADHD.

Settings: Southend University Hospital, ADHD out patient service.

Methods: Three recent case reports of children and young persons who attended the ADHD service are presented.

Case 1. Severe sleep deprivation poor school attendance and aggression: Male aged 12 years presented with significant inability to sustain attention, poor impulse control with at risk behaviours. He had significant out bursts of verbal aggression but lesser degree of aggression towards property and physical aggression but not towards self. (Kronenberger et al scales). History revealed significant sleep deprivation due to online gaming and poor attendance at school due to day time addiction to games consoles. His frustration tolerance was very poor.

Case 2. Well controlled ADHD in a teenager with gradual loss of organisational skills with an impact on school grades: Young person aged 14 with well controlled ADHD core symptoms presented with failing grades due to poor time management. History revealed more than 6 h a day of online gaming. There were no episodes of significant aggression though the frustration tolerance was reduced.

Case 3. Well controlled ADHD with no deterioration of school performance: Male 10 years with ADHD on stimulants, spends more than 6 h a day on online gaming, game consoles, oppositional defiant behaviour in the home setting that has not changed to the worse with gaming. School performance no apparent deterioration.

Recommendations: Impact of online gaming and addiction to electronic games on Desktops, games consoles and social media sites is an ever increasing behavioural change noticed in today's children and young people. The true impact on children who have a poor frustration tolerance, self regulation needs further exploration through large scale studies.

P01-34

Evaluation of psychopathological risk for depressive disorder in adolescents with ADHD subjects by the administration of the questionnaire C.D.I.

Riccio, Maria Pia¹; Sarnataro, Emilia²; Majorano, Assunta³; Villari, Martina⁴; Tiano, Claudia³; Pascotto, Antonio³

¹Second University of study of Naples, Neuropsychiatry, Italy;

²Second University of Naples, Italy; ³Second University of Study of Naples, Italy; ⁴University “Federico II” of Naples, Italy

Introduction: Attention-deficit/hyperactivity disorder is a neurobiological syndrome with an estimated prevalence among children and adolescent of 5%. Children with ADHD are characterized by early onset of symptoms of hyperactivity, impulsivity and poor sustained attention. It is a highly heritable disorder, but acquired factors of

etiology are sometimes uncovered that may amenable to preventive measures or specific therapy. Frequently it is associated with other psychiatric disorders, especially Oppositional Defiant Disorder (40%), anxiety disorders (34%), Conduct disorder (14%), Tic (11%) and mood disorders (4%).

Aim: To assess the extent of depressive symptoms in a population of individuals with ADHD Patients and methods: 11 male patients aged between 14 and 16 years with ADHD, including 3 patients with ADHD inattentive subtype, 8 patients with ADHD combined subtype, came at the center of reference for ADHD of the Second University of Naples, in period between April 2009 and April 2010. All patients perform multimodal treatment. Patients were screened by the administration of the questionnaire CHILDREN DEPRESSION INVENTORY (CDI) to identify early indicators of depressive illness.

Results: The analysis of data collected in the questionnaire CDI shows an average score of 15.45, indicative for symptomatic aspects of depressive disorder. In particular, we highlight the presence of feelings of low self-esteem, insecurity and guilt. Patients with ADHD inattentive subtype have, on average, a higher score (equal to 17.33) to the questionnaire than other patients, although this score does not exceed the cut-off scale for depression.

Conclusions: The results appear indicative of an increased risk of psychopathology in the adolescent with ADHD to depression. The early detection of depressive symptoms allows a targeted and immediate intervention aimed at preventing the onset of depressive comorbidity.

P01-35

Transcranial current direct stimulation (tDCS): therapeutic challenges for ADHD

Rubio-Morell, Belen¹; Rotenberg, Alexander²; Herreros, Oscar³; Monzon, Josue¹; Exposito, Sergio⁴; Pascual-Leone, Alvaro⁵

¹Hospital Universitario de Canarias, Child and Adolescent Psychiatry Unit, Spain; ²Children's Hospital-Harvard Medical School, Berenson-Allen Center for Noninvasive Brain Stimulation, USA; ³Hospital San Agustin de Linares, UGC Salud Mental, Spain; ⁴Universidad de La Laguna, Departamento de Psicobiología y Metodología de las, Spain; ⁵Beth Israel Deaconess Medical Center, Harvard Medical School, Berenson-Allen Center for Noninvasive Brain Stimulation, USA

Background: Attention deficit-hyperactivity disorder (ADHD) is a common neurodevelopmental disorder, in part a disorder of neuroplasticity, that is refractory to conventional pharmacotherapy in as many as one third of all subjects. Thus, nonpharmacologic treatment strategies based on noninvasive brain plasticity neuromodulation could be promising. There are two primary methods of noninvasive brain stimulation currently available: transcranial magnetic stimulation (TMS) and transcranial direct current stimulation (tDCS). Although their utilization remains limited in pediatric neurology and psychiatry, there may be enough evidence for their rational, safe use in this population.

Aim: To review the principles that support development of tDCS as a safe therapeutic approach in pediatric ADHD.

Conclusion: Published data suggest that tDCS may ameliorate executive dysfunction and inhibitory control deficits, and may control hyperactivity in children with ADHD. tDCS appears safe and well-tolerated and warrants further study as a therapeutic tool. In particular, patients with ADHD symptoms that are refractory to pharmacotherapy, or patients with comorbidities, such as brain trauma, Tourette syndrome and epilepsy, might obtain greater benefits from tDCS than from ADHD pharmacotherapy alone.

Reference:

1. Fregni F, Pascual-Leone A Technology insight: noninvasive brain stimulation in neurology-perspectives on the therapeutic potential of rTMS and tDCS

P01-36

Effects of OROS[®] methylphenidate (MPH) treatment on behavior and performance in children with ADHD with and without comorbid learning disability

Starr, H. Lynn¹; Armstrong, Robert¹; Damaraju, CV²; Ascher, Steve²

¹Johnson and Johnson, Psychiatry, USA; ²Johnson and Johnson, Biostatistics, USA

Objective: Learning disabilities (LDs) are more common in children with ADHD than without ADHD. We evaluated effects of OROS MPH on performance in children with ADHD with and without LDs.

Methods: We analyzed 2 double-blind, randomized, placebo-controlled, crossover, analog classroom studies evaluating OROS MPH in 9–12-year-olds with ADHD (NCT00799409, NCT00799487). Subjects had Wechsler Abbreviated Scale of Intelligence scores >80 with or without mild/moderate math LD (Wechsler Individual Achievement Test[®]—2nd Edition Numerical Operations scores ≥ 71 and ≤ 85) and/or language LD (Gray Oral Reading Test fluency or Comprehensive Test of Phonological Processing standard scores ≥ 4 and < 8). Subjects took individually determined doses of OROS MPH for 6 weeks, except on 2 laboratory school days when randomized to OROS MPH on day 1/placebo on day 2 or the reverse. Permanent Product Math Test number attempted (PERMP-a) and correct (PERMP-c) and Swanson, Kotkin, Agler, M-Flynn, and Pelham (SKAMP) scores were measured on both days.

Results: Of 139 subjects, 89 (64%) had no LD, 46 (33%) had LD, and 4 (3%) were undetermined. Subjects had greater LS mean PERMP-a and -c scores with OROS MPH than placebo. Treatment effects for PERMP-a occurred in subjects without LD (OROS MPH, 114.6; placebo, 82.2) and with LD (OROS MPH, 100.9; placebo, 81.6), $p < 0.0001$. Treatment effects for SKAMP composite scores: subjects without LD (OROS MPH, 8.4; placebo, 19.5) and with LD (OROS MPH, 10.4; placebo, 19.2), $p < 0.0001$. Similar patterns were seen in SKAMP attention and deportment scores. AEs in $\geq 10\%$ of subjects: headache, upper abdominal pain, decreased appetite, irritability, and initial insomnia. Two subjects discontinued due to AEs. No serious AEs or deaths were reported.

Conclusions: Behavior and performance improved during treatment with OROS MPH in children with ADHD with and without comorbid learning disability.

P01-37

Lisdexamfetamine dimesylate (LDX) in children with ADHD after suboptimal response to methylphenidate

Jain, R¹; Duncan, D²; Babcock, T³; Burtea, T⁴; Dirks, B³; Adeyi, B³; Shaw, M⁵

¹Texas Tech Medical School-Permian Basin, Midland, TX, Department of Psychiatry, USA; ²BC Interior ADHD Clinic, Kelowna, BC, Canada; ³Shire Development Inc., Wayne, PA, USA;

⁴Shire Canada Inc., Saint-Laurent, QC, Canada; ⁵Shire Pharmaceuticals, Basingstoke, UK

Background: Lisdexamfetamine dimesylate (LDX), a prodrug stimulant approved in Canada and the USA for treatment of ADHD, is now under evaluation for use in children and adolescents in Europe. **Aims:** Assess LDX efficacy in children aged 6–12 years with ADHD, in particular those with suboptimal response to methylphenidate (MPH).

Methods: Post hoc analyses were performed of 3 studies of LDX in children with ADHD: a randomized, double-blind, forced-dose titration,¹ an open-label, dose-optimization² and a randomized, double-blind, dose-optimization, laboratory school study.³ Among other efficacy measures assessed in subjects with prior MPH treatment were the ADHD-RS-IV and CGI-I scale.

Results: Of children who received LDX (n = 213) or placebo (n = 72) in the forced-dose titration study,¹ 26 (19 LDX, 7 placebo) were prior MPH users who remained symptomatic (ADHD-RS-IV > 18). ADHD-RS-IV total scores, changes from baseline, clinical responsiveness and rates of symptomatic remission in this subgroup were comparable to the overall population assessed in the trial. In the open-label study (83/316 previous MPH)² and placebo-controlled study (67/129 previous MPH),³ over 80% of children who had previously received MPH were classified as clinical responders ($\geq 30\%$ reduction in ADHD-RS-IV total score; CGI-I score of 1 or 2) when subsequently treated with LDX. A statistically significant improvement was seen on all other assessments for patients treated with LDX (SKAMP-D,³ EESC, BRIEF and PERMP [attempted and completed]—further details in poster).

Conclusions: Clinical ADHD symptoms improved in children treated with LDX following prior MPH treatment in all 3 studies, with similar efficacy to the overall population studied in the forced-dose titration study.

Supported by funding from Shire Development Inc.

References:

1. Biederman J et al (2007) *Clin Ther* 29:450
2. Findling RL et al (2009) *J Child Adolesc Psychopharmacol* 19:649
3. Wigal SB et al (2009) *Child Adolesc Psychiatry Ment Health* 3:17

P01-38

Childhood attention deficit/hyperactivity disorder; pitfalls in diagnostics and therapy

Šmigovec, Iva; Otić, Ivan

General Hospital Bjelovar, Department of psychiatry, CROATIA

A case presented is a 10 year old boy diagnosed with an attention deficit hyperactive disorder on his first psychiatric examination in 2009. At the same time, psychostimulant medication was recommended. Boy's mother did not approve psychostimulants. Psychologist tested this patient three times and came up with attention and focus difficulties, psychomotor distraction, above average cognitive skills, difficulties reading and writing. During his second visit to another psychiatric office in September 2009, boy was restless, able to sit in a chair for about a minute or two, walked around, touching a computer keyboard, climbed on the examination table, not reacting to his mother trying to calm him down. Psychostimulant medication was postponed and the boy was included in regular psychiatric treatment with psychodynamically oriented

psychotherapy. Psychotherapy was made in order to correct hyperactive behaviour and to set clear boundaries by his mother. Boy was encouraged to recognize his real needs and feelings by psychotherapy interventions. Partial verbalization of suppressed and unrecognized emotional content was achieved. During last two psychiatric visits boy with diagnosed ADHD was sitting calmly in his chair, talking to his therapist calm and focused. Nowadays, the boy is able to mostly keep his attention in school, he has better cooperation with other pupils and teacher, also, hyperactivity is diminished. Complex family dynamics was exposed, verbal interactions between family members were analysed, and as a result, emotions of sadness and anger within a boy surfaced. Diagnosis of ADHD and prescription of drugs should not be made easily. Hyperactivity symptoms in a child often point to a turbulent family dynamics and in this case are a way for an immature, unseparated, young patient to deal with his family situations. Psychiatric follow up should take time before diagnosis of ADHD is made and psychostimulants are prescribed.

P01-39

EEG as a biomarker separated ADHD patients into clinically meaningful subgroups

Snyder, Steven M.¹; Rugino, Thomas A.²; Hornig, Mady³; Daviss, W. Bursleson⁴; Scheffer, Russell E.⁵; Williams, Roger A.⁶; Tsai, Guochuan Emil⁷; Davis, Ronald⁸; McBurnett, Keith⁹

¹Lexicor Medical Technology; Georgia Health Sciences University, USA; ²Children's Specialized Hospital; Robert Wood Johnson School of Medicine, USA; ³Columbia University, USA; ⁴University of Texas Health Science Center at San Antonio, USA; ⁵University of Kansas School of Medicine, USA; ⁶Mercer University School of Medicine, USA; ⁷Harbor-UCLA Medical Center, USA; ⁸Pediatric Neurology, USA; ⁹UCSF School of Medicine, USA

To support clinical use of potential ADHD biomarkers, methods are needed to apply biomarkers in a manner that would augment a clinician's ADHD evaluation. One method may be to use a biomarker to separate ADHD patients (as diagnosed by clinicians) into test-result subgroups. The potential utility would be supported by presence of clinically meaningful differences between the subgroups. To evaluate this method using a pre-defined EEG biomarker, investigators conducted a prospective, double-blinded, multi-site, clinical cohort study. Recruits were 364 children and adolescents, ages 6.00–17.99 years, presenting consecutively with attentional and behavioral concerns to 13 clinical sites. ADHD was determined prospectively by best estimate diagnosis per majority agreement of 3 diagnosticians independently reviewing comprehensive clinical data sets collected by each site. After blind-break, EEG results were used to separate ADHD patients into two test-result subgroups: (1) EEG-positive (standardized theta/beta ratio greater than a pre-defined cutoff), N = 101, and (2) EEG-negative, N = 89. As compared with the EEG-positive subgroup, the EEG-negative ADHD subjects were significantly more likely to have at least one of the following clinical features: a psychiatric disorder that could exclude ADHD from primary diagnosis, a medical or neurological condition known to mimic ADHD, an uncorrected vision or hearing problem, history of no improvement or adverse events on ADHD medications, presentation with a primary concern of aggression or anger, satisfactory academic and intellectual performance, and/or evidence of dissatisfaction with ADHD diagnosis (odds ratio = 2.4; 95% confidence interval = 1.3–4.6). In conclusion, EEG parsed ADHD subjects into clinically meaningful subgroups. EEG-negative ADHD patients were

more likely to have clinical features that may require further evaluation before accepting ADHD as the primary diagnosis.

P01-40 Therapy effects by using neurobiofeedback and methylphenidate in therapy of attention deficit hyperactivity disorder

Stankovic, Miodrag; Kostic, Jelena; Milosavljevic, Ljubisa

Clinic for Mental Health Protection, Department for Child and Adolescent Psychiatry, Serbia

Objective: This study is intended to show that there is a difference between short-term and long-term effects in therapy of ADHD by using NFB and MPH separately.

Method: We compared the behavioral response among two groups of schoolchildren aged 8–12 years with history of drug-free diagnosed ADHD during 3 months. Both groups did not differ on pretreatment the IOWA-Conners Scale for parents ratings. First group were children whose started using once-daily controlled-release formulation of MPH (average dose was 18 mg per day) and second group were children whose been treated for 1 h three times a week by NFB stimulation program providing reinforcement contingent on the production of cortical sensorymotor rhythm (SMR, 12–15 Hz) and beta activity (15–18 Hz). After 3 months, we stopped treatment and followed children behavior externalization during next 3 months.

Results: Both NFB and MPH treatment were highly positively correlated with pre and posttreatment (both $p < 0.001$) on IOWA-Conners Behavior Rating Scale. Both treatments resulted in improved parents' ratings, neurofeedback ($p < 0.007$), and methylphenidate ($p < 0.001$). Significant improvement were among predominately inattentive, hyperactive, and combined subtype of children with ADHD ($p < 0.001$). Children from first group showed significantly improvement during first month of drug using and maintained effects until end of using drug. After stopping of drug-taking the same children showed significantly quicker relapse compared to children from second group whose been maintained improvement next three month.

Conclusions: Results indicate that children treated with MPH showed quicker improvement than children whose been stimulated by using NFB whose maintained effects longer after stopping of both treatment methods. These findings suggest that NFB could be also first line treatment in improving symptoms of ADHD in children whose parents favored a non-pharmacological and non-invasive treatment.

P01-41 Monitoring social behavior using the Child Conflict Index in children with ADHD treated with OROS® methylphenidate

Starr, H. Lynn¹; Armstrong, Robert²; Damaraju, CV²; Asher, Steve²

¹Johnson and Johnson, Department of Psychiatry, USA; ²Johnson and Johnson, Psychiatry, USA

Objective: This study evaluated social behavior of children treated with OROS® methylphenidate.

Methods: Data from 2 open-label dose-optimization studies evaluating OROS MPH in children aged 9 to 12 years with ADHD

(NCT00799409, NCT00799487) were pooled. OROS MPH 18-mg/d treatment was flexibly dosed to a maximum of 54 mg/d. Subjects continued their optimized dosage for up to 6 weeks. The Child Conflict Index (CCI), 1 which captures conflict/attention-seeking and negativity/withdrawal behaviors, was administered by telephone to parents/caregivers just before baseline, at each dosage-adjustment visit, and at the final study visit. Changes from baseline total CCI scores were evaluated using paired Student t tests.

Results: Of 167 subjects in the safety analysis set, 115 were boys and 52 were girls. Mean optimized OROS MPH dosage was 41.1 mg/d (SD = 12.9). Mean baseline total CCI score was 8.5 (SD = 4.22) for boys and 7.0 (SD = 2.92) for girls. Statistically significant ($P < 0.05$) improvements in total CCI score occurred at the first dosage adjustment visit (change of -1.9 [SD = 4.24] for boys, -1.0 [SD = 2.61] for girls) and at most subsequent dosage-adjustment visits for each gender group and dosage level (18, 36, and 54 mg/d). At the final study visit, both boys and girls had statistically significant improvements from baseline CCI scores (change of -6.2 [SD = 3.99] for boys, -4.9 [SD = 3.75] for girls; $P < 0.0001$ for both). Two subjects discontinued because of adverse events (AEs) during the dosage adjustment period. AEs reported by $\geq 10\%$ of subjects were headache, abdominal pain upper, decreased appetite, irritability, and initial insomnia. No serious AEs or deaths were reported.

Conclusions: Statistically significant improvement on the CCI occurred during the first week of OROS MPH treatment and was sustained at the final study visit for both girls and boys. No unexpected or severe AEs were reported.

P01-42 Neuropsychological and clinical effects of a multimodal behavioral ADHD summer camp training

Steinmann, Elisabeth¹; Gerber-von Müller, Gabriele²; Siniatchkin, Michael³; Stephani, Ulrich¹; Petermann, Franz⁴; Gerber, Wolf-Dieter²

¹Clinic for Neuropediatrics of the University of Kiel, Germany; ²Institute of Medical Psychology, Christian-Albrechts-University of Kiel, Germany; ³Clinic for Child and Adolescents Psychiatry, Philipps-University of Marburg, Germany; ⁴Department of Clinical and Rehabilitation Psychology, University of Bremen, Germany

Background: Several previous studies demonstrated that learning theory-based methods decrease behavioral difficulties of individuals with ADHD. But the specific effects of these strategies without applying additional medication are not clear. The present study investigates whether a multimodal, intensive, learning theory-based ADHD summer camp group training (ASCT) without medication leads to improvements in neuropsychological functions and clinical symptoms.

Methods: 24 children and adolescents with ADHD (mean age 10.1; age range 7–14; 4 girls) participated in an ASCT during 2 weeks. The training program included social skills training, sports activities, a specific attention training and a parental education intervention. In all daily situations and activities a systematic response cost and token strategy (RCT) was applied. In an experimental pre-post design executive functions were assessed using the Trail Making Test (TMT), the Test for Attention Performance (TAP) and the digit-span task. Additionally, teachers and parents completed clinical questionnaires for symptoms of ADHD and disruptive behavior. Medication was discontinued for all patients before and during the ASCT.

Results: The results showed a significant improvement in specific neuropsychological functions like attention regulation, speed of information processing, cognitive flexibility and working memory. The ASCT improved inhibitory control and decreased the response

variability of the children. Six weeks after the camp the scores in parent-reported and teacher-rated behavioral symptoms were lower. **Conclusions:** The results of the study demonstrate that a multimodal, intensive, learning theory-based summer camp training combined with RCT leads to improvement in neuropsychological functions and clinical symptoms.

P01-43

Characteristics of neurocognitive function in ADHD children—comparative study of Clinical Assessment for Attention (CAT)

Ushijima, Hirokage¹; Kodaira, Masaki²; Kuroe, Mihoko²; Ikeda, Manabu³; Saito, Kazuhiko²

¹Kumamoto University, Neuropsychiatry, Japan; ²National Center for Global Health and Medicine, Kohnodai Hospital, Child and Adolescent Psychiatry, Japan; ³Kumamoto University, Faculty of Life Science, Psychiatry and Neuropathobiology (Neuropsychiatry), Japan

Purpose: Purpose of this study was to evaluate the neurocognitive function included executive function, decision making, and attention in Attention Deficit Hyperactivity Disorder (ADHD) children by using several neuropsychological tests.

Method: Twenty-five unmedicated ADHD children (ADHD group; 22 boys and 3 girls, mean age was 142.5 ± 25.1 month) and 17 healthy children (control group; 12 boys and 5 girls, mean age was 145.6 ± 17.2 month), aged 10 to 15 year old participated in this study. We divided all participants into two age groups. One is elementary school group and the other is junior high school one. In both age groups, we compared neurocognitive function between ADHD and control subjects. To evaluate neurocognitive function, we used Wisconsin Card Sorting Test (WCST), Iowa Gambling Task (IGT), and Clinical Assessment for Attention (CAT). CAT is a comprehensive assessment battery for attention constructed by the Brain Function Test Commission of Japan Society for Higher Brain Dysfunction. CAT comprises 8 components including Span, Cancellation and Detection Test, Auditory Detection Task, Symbol Digit Modalities Test (SDMT), Memory Updating Test, Paced Auditory Serial Addition Test (PASAT), Position Stroop Test, and Continuous Performance Test (CPT).

Result: There is no significant difference in performance on WCST and IGT between ADHD group and control group in each age. In elementary school, performance on Auditory Detection Task, SDMT, Memory Updating Test, Position Stroop Test and CPT in ADHD group is significantly worse than that in control group. In junior high school, performance on Auditory Detection Task and Position Stroop Test in ADHD group is significantly worse than that in control group.

Conclusion: Neurocognitive function deficit in ADHD children might be defined in attention, especially in selective attention (auditory input) and alternating attention (conflict monitoring).

P01-44

Polymorphism of the norepinephrine transporter gene (SLC6A2) and structural brain alterations in Korean ADHD sample: preliminary study

Yang, Young-Hui; Kim, Jae-Won; Kim, Boong-Nyun; Shin, Min-Sup; Cho, Soo-Churl

Seoul National University Hospital, Child and Adolescent Psychiatry, Republic of Korea

Objectives: we investigated whether there was an association between polymorphism of the norepinephrine transporter gene and volumetric brain alterations in Korean ADHD sample.

Methods: Total of fifty-four children (8 girls and 46 boys, 9.0 (±1.94) years) participated in this study. Subjects were recruited from the outpatient's clinic of child and adolescent psychiatry in the Seoul National University Hospital. The diagnosis of ADHD was made based on DSM-IV-TR. The genotyping of SLC6A2 [G1287A, -3081(A/T)] was done. All patients were unmedicated at time of MR imaging acquisition. Voxel Based Morphometry (VBM) was used to compare images between two groups divided by genotype.

Results: Total of fifty-three children completed this study. Children with the G/A and A/A genotypes at the SLC6A2 G1287A polymorphism showed smaller brain volume in the right inferior frontal gyrus than children with G/G genotype (FEW-corrected p-value 0.037). There was not significantly smaller brain volume in children with G/G genotype compared to children with G/A and A/A genotypes at corrected p-value <0.05. In -3081(A/T) polymorphism, there were not significant brain volume alterations across genotypes at corrected p-value <0.05.

Conclusion: This study showed that the norepinephrine transporter gene, SLC6A2, might be associated with alteration of brain structure, especially in the frontal lobe in the children with ADHD.

P01-45

Difficult moments in ADHD, A practicum workshop on treating preschool, sleep and comorbid epilepsy

Sankar, Sachin¹; Somnath, Banerjee²; Pert, Lyndsey³

¹Northamptonshire Healthcare Trust, CAMHS, UK; ²George Still forum, UK; ³NHS Fife, Scotland, Dunfermline and west CHP, UK

Speaker 1 Lyndsey Pert Topic Treating Sleep Problems in Children with ADHD Lisa is a nurse specialist with a vast experience in running specialist sleep clinics. The workshop will look at diagnosis of different sleep problems that occur in children with ADHD. Provide simple diaries which can be used to help collect Data to aid the clinician in choosing appropriate methods of dealing with the problem. There will be a focus on nonpharmacological therapies and management techniques. And the discussion on clear guidelines as to when we should go for pharmacological treatment. Speaker 2 Dr Somnath Banerjee Topic Treating ADHD with Comorbid Epilepsy Overactivity is a common comorbid symptom seen in children with epilepsy. Up to 33% children with epilepsy have a diagnosis of ADHD. However the percentage of children with epilepsy being treated for their ADHD remains very low. The workshop looks at problems of diagnosis. Reasons for non-treatment and undertreatment. The workshop will look into treatment of both epilepsy in children with ADHD. As well as treatment options for ADHD in children with controlled as well as uncontrolled ADHD Speaker 3 Dr Sachin Sankar Topic Treating ADHD in Preschool Children With increased recognition of ADHD. The age at which children first present at clinics has been steady the falling in the UK. Preschool children especially the ones where an older sibling is undertreatment are often referred for treatment. In the UK there are no drugs licensed for children in the preschool age. The workshop looks into problems of diagnosis. Comparing the common tools used for diagnosis. Looks at when the diagnosis can be made. It will further look at treatment options available in this group of children. It looks at side-effect profiles and Common pitfalls of treating children of this age group with common ADHD medication. The workshop will also look at the long-term prognosis in this group of children and the consequences of whether they have been treated.

P01-46**Successful methylphenidate treatment of obesity in a boy with a melanocortin-4 receptor gene mutation and attention deficit/hyperactivity disorder**

Albayrak, Özgür¹; Albrecht, Beate²; Scherag, Susann¹; Barth, Nikolaus¹; Hinney, Anke¹; Hebebrand, Johannes³

¹LVR Klinikum Essen, University of Duisburg-Essen, Dept. of Child and Adolescent Psychiatry, Germany; ²University of Duisburg-Essen, Dept. of Human Genetics, Germany; ³LVR Klinikum Essen, Dept. of Child and Adolescent Psychiatry, Germany

We present the case report of a 2 year old boy with early onset extreme obesity (body mass index (BMI) 34.2 kg/m²; body mass index standard deviation score (BMI-SDS) 5.4) who is heterozygous for a non-conservative functionally relevant melanocortin MC4 receptor mutation (Glu308Lys) and who also showed severe symptoms of attention deficit/hyperactivity disorder (ADHD). Treatment with the stimulant methylphenidate led to a sharp decrease of BMI to 21.8 kg/m² (BMI-SDS 2.8) within 24 months. We discuss potential mechanisms for this unusually large weight loss and suggest a potential link between the melanocortinergic and the dopaminergic systems, and the sympathetic nervous system. The potential benefit of methylphenidate in obese melanocortin MC4 receptor mutation carriers with and without co-morbid ADHD warrants further studies.

P01-47**Self-esteem in adolescence related to ADHD subtypes in early adulthood: a seven-year follow-up**

Edbom, Tobias¹; Larsson, Jan-Olov²

¹Karolinska Institutet, Department of Women's and Children's Health, Sweden; ²Karolinska Institutet, Department of Women's and Children's Health, Sweden

Background: Attention-deficit hyperactivity disorder (ADHD) is known as a developmental disorder and consists of persistent symptoms of inattention, hyperactivity, and impulsivity. The disorder does not only affect children but also adults with risk for coexisting problems such as anxiety, depression, social interaction, relationship difficulties and low self-esteem.

Aim: The aim is to study self-esteem in adolescents and its long-term relationships with symptoms of ADHD in young adulthood. We will test the hypothesis that a low self esteem is more associated to the development of the inattentive subtype of ADHD compared with the hyperactive/impulsive subtype.

Method: All twins that where born in Sweden between May 1985 and December 1986 was eligible for participation. Data on self-esteem were collected at 14 years of age and ADHD subtypes at 21 years of age. The self-reported symptoms of ADHD subtypes were classified in both dimensional and categorical measures, at follow-up, were used as the outcome measure and the relationship with self-esteem at age 14 was analyzed.

Results: The highest odds ratio for adolescents with low self-esteem to have a high score in an ADHD subtype at age 21 was found for high score subtype inattention (2.69 for boys, 2.86 for girls and 2.47 for the total group) compare to hyperactivity (1.33 for boys 1.91 for girls 1.73 for the total group) and combined group (2.66 for boys, 2.84 for girls and 2.78 for total group).

Conclusion: There was a relationship, especially in boys, between low self-esteem in adolescence and high scores of the ADHD inattention subtype in early adulthood.

P01-48**Group intervention for children with ADHD. A prospective intervention technique in a private CAMHS setting**

Goel, Bhavana; Menon, Soumini; Gupta, Deepak

Centre for Child and Adolescent Wellbeing, India

Purpose: In the following paper, we aim to explain the development of a group intervention program for children with Attention Deficit Hyperactive Disorder (ADHD).

Background: ADHD is one of the most prevalent and well researched mental health problems amongst young children and adolescents across the globe. Over the years various therapeutic interventions have been validated for the management of ADHD, like Cognitive Behavior Therapy, Behavior Modification Plan and Psychotropic Medications. However, a child with ADHD often faces a lot of comorbid psychological issues secondary to impulsivity, hyperactivity and attention difficulties. These could include low confidence, poor peer relations, low self esteem and aggression. Experiential understanding of their difficulties and hence forth developing their insight intelligence for the management of these difficulties is one of the main focuses of the intervention. A group intervention provides an opportunity for a child self growth and improve social skills.

Methods: In the following research we included a mixed group of children, diagnosed with ADHD (DSM-IV-TR), within the age group of 8–10 years, belonging to upper middle class section of New Delhi. Parents of the participant children filled in the Strengths and Difficulty Questionnaire (SDQ) form, once before the enrollment and second after 4 weeks and third after 8 weeks of group interventions. Techniques used in the sessions included role play, enactment of emotions, drawings, dance, music and other form of activities to improve the child's functioning in a natural setting.

Conclusion: Over the past 2 months, an initial qualitative and quantitative analysis of the current group has shown promising results, indicating that group intervention is a possible promising therapeutic technique for symptomatic management for ADHD children in a private Child and Adolescent Mental Health Services (CAMHS) setting.

P01-49**ADHD in people with mental retardation**

Häßler, Frank

University Rostock, Clinic of Child and Adolescence Neuropsychiatry, Germany

Hyperactivity syndromes and disorders (ADHD and HKD) include symptoms of overactivity, inattention, and impulsivity. These symptoms occur also in many other mental disorders including mental retardation (MR). Thus, it is not surprising that symptoms of ADHD have been found at significantly higher levels in several

studies of mentally retarded children. For example, Dekker and Koot (2003), found a prevalence rate of 14.8% for ADHD of any kind in Dutch children attending special schools. Emerson (2003) reported rates of 8.7% of HKD in children with global learning disability which is a tenfold increased risk compared to the prevalence of hyperactivity (0.9%) in the general population sample. Only few studies on ADHD in children with mental retardation have been performed. Several features distinguish the diagnoses of ADHD and MR. A first way of differentiating between ADHD and MR should consider the course of the two disorders over the life-span. MR is rather a trait while ADHD should be considered a state. Secondly, among children with mental retardation gender differences in ADHD appear to be much smaller than gender differences in children with normal abilities (Hastings, 2005). In contrast to our limited knowledge about the differences and similarities of ADHD and MR, there are many studies about stimulant medication as a pharmacological management strategy for children suffering from either ADHD or MR or both. Results based on these studies indicate that psychostimulants may improve the target symptoms of hyperactivity, impulsivity, disinhibition and inattention with some limitations. ADHD symptoms in patients with MR may be less responsive to medical treatment, compared to patients without MR. Moreover, people with MR may be more susceptible to side effects (Thomson et al. 2009).

P01-50

A comparison of alarm treatment results for Brazilian children with Enuresis plus ADHD X no ADHD

Mattos Silves, Edwiges Ferreira de; Bezerra de Sousa, Carolina Ribeiro

São Paulo University, Clinical Psychology, Brazil

Bedwetting and ADHD association is frequent; approximately 20–30% of children with Monosymptomatic Nocturnal Enuresis (MNE) show also ADHD, but literature on such comorbidity is rare. This study compares results of alarm treatment for children with (MNE plus ADHD) × (MNE without ADHD). 31 MNE children (6–13 years of age) were divided: experimental group EG (n = 13 MNE plus ADHD children) and Control Group-CG (n = 18 MNE without ADHD children). The treatment was the same for both groups: Full Spectrum Home Training, with bi-weekly sessions of psychological therapy, for a period of 32 weeks. There was no significant difference between groups regarding socio-demographical variables or outcomes. EG data = 53.8% discharge criteria (14 dry nights after starting over learning time), 7.7% initial success (first 14 dry nights after alarm treatment started), 7.7% failure (no initial success) and 30.0% dropout (or treatment discontinuation) as opposed, respectively to CG = 61.1, 11.1, 16.6 and 11.1%. It was not either found difference on average of weeks to reaching initial success in the two groups (EG = average of 13 weeks × CG = average of 16 weeks). The EG, however, had greater information missing (lack of records) during treatment course—an indirect adherence problem sign. Outcomes that disconfirm data of scarcely studies found in literature about treatment of this comorbidity are discussed as well as the data on the adherence to Enuresis treatment (other rare topic in literature). Limitation on the composition of the study sample will also receive attention on the end by its implications on literature of either ADHD or Enuresis epidemiology. FAPESP&CNPq.

P01-51

Differences and similarities in pharmacological treatment outcomes between children and adolescents with ADHD transitioning onto OROS MPH

Schaeuble, Barbara¹; Berek, Michael²; Kordon, Andreas³; Mattejat, Fritz⁴; Rettig, Klaus⁵

¹Janssen EMEA, Medical Affairs, Germany; ²Child and Adolescent Psychiatry, Private Practice, Germany; ³Department of Psychiatry, University of Lübeck, Germany; ⁴Department of Psychiatry, University of Marburg, Germany; ⁵Biostatistics and Quality Management, GEM, Germany

Objective: To explore differences in function and quality of life outcomes in children versus adolescents with ADHD transitioning from IR MPH, ER MPH or ATX onto OROS MPH.

Methods: Pooled analyses of two similar 12 week, open-label, flexibly dosed trials studying children (6–12 years of age) and adolescents (13–18 years of age) with ADHD insufficiently responding to current treatment transitioning onto OROS MPH. Outcome parameters included safety measures, Connors parents' rating scale (CPRS), and functionality and quality of life outcomes (ILC) based on proxy assessments (parents).

Results: 583 children and 239 adolescents (N = 822, 85% boys) were analyzed. Adolescents were first diagnosed at 10 + 2.9 years compared to 7.3 + 1.9 years in children (p < 0.001). Co-morbid anxiety, OCD, ODD and conduct disorder were diagnosed at similar rates in both groups. Substance use occurred only in the adolescent group (p < 0.001). Mean OROS MPH starting and final dose were higher in adolescents (37.6 mg/day vs. 29 mg/day, respectively, at start and 32.8 vs. 41.9 mg/day at endpoint). Mean treatment duration on study was longer in adolescents (87.4 vs. 82.9 days, p < 0.012). 61.5% of adolescents versus 53.1% of children experienced an at least 30% reduction on CPRS (p = 0.03) while having comparable baseline scores. ILC total score (proxy) was lower in adolescents at study start (p = 0.009), but comparable at endpoint (p = 0.607). Adolescents showed worse baseline scores (proxy) in "school performance", "family functioning", "mental health", and "global QoL" (all p < 0.008). Of these single items, "family functioning" continued to be lower in adolescents compared to children (p < 0.001).

Conclusion: Clinically relevant differences between children and adolescents with ADHD are present. Adolescents appeared to have a lower quality of life and function compared to children at baseline, however, they were able to reach comparable ratings at endpoint for most items. OROS MPH was generally safe and well tolerated.

P01-52

Changes in function and quality of life aspects in children with ADHD after transitioning onto OROS MPH

Schaeuble, Barbara¹; MATTEJAT, Fritz²; Rettig, Klaus³; Kordon, Andreas⁴; Berek, Michael⁵

¹Janssen EMEA, Medical Affairs, Germany; ²Department of Psychiatry, University of Marburg, Germany; ³Biostatistics and Quality Management, GEM, Germany; ⁴Department of Psychiatry, University of Lübeck, Germany; ⁵Child and Adolescent Psychiatry, Private Practice, Germany

Objective: To explore function and quality of life outcomes in children with ADHD transitioning from IR MPH, ER MPH or ATX onto OROS MPH.

Methods: Pooled analyses of two similar 12 week, open-label, flexibly dosed trials exploring clinical outcomes in children (6–12 years of age) with ADHD transitioning onto OROS MPH because of inadequate efficacy and/or tolerability. Outcome parameters included safety measures, Connors parents' rating scale (CPRS), children's global assessment scale (C-GAS), and functionality and quality of life outcomes (ILC) based on children and proxy (parents) assessments. Missing values were imputed using last-observation-carried-forward (LOCF). Relationships between functional and symptomatic parameters were explored using Spearman's rank correlation coefficients.

Results: 583 children (86% boys) were analyzed (ITT population). Average OROS MPH dose increased from 29.1 + 11.7 to 32.8 + 12.7 mg/day at endpoint ($p < 0.0001$). 20.6% terminated the study prematurely. All function and quality of life measures improved on self and proxy assessments at endpoint (except for "physical health"; all $p < 0.001$). School performance, social integration, pursuing interests and hobbies, mental health and decreased burden of disease were areas of largest improvements at endpoint ($p < 0.0001$). Mean change from baseline to endpoint in CPRS was $-9.7 + 11.4$ ($p < 0.001$). Pre-post- changes of ILC and CPRS, ILC and C-GAS correlated modestly in proxy ratings ($r = -0.57$ and $r = 0.49$, respectively). Treatment-emergent AEs occurred in 37.1% of patients. AEs $> 4\%$ were insomnia (8.9%), involuntary muscle contractions (5.7%), anorexia (5.3%). Vital signs were virtually unchanged.

Conclusion: Transitioning onto OROS MPH in children with ADHD was associated with a clinically relevant improvement in daily functioning, several aspects of quality of life and decreased burden of disease. OROS MPH was generally safe and well tolerated.

P01-53

ADHD and season of birth: is there any relation?

Shirazi, Elham¹; Estakhri, Hadi²; Shahrivar, Zahra¹

¹Mental Health Research Center, Tehran University of Medical Sciences, Department of Psychiatry, Islamic Republic of Iran;

²Mental Health Research Center, Islamic Republic of Iran

Background: A season of birth (SOB) tendency is found for some psychiatric disorders. SOB was associated with ADHD in two existing studies. Identification of seasonally mediated risk factors for ADHD could help design preventive and therapeutic intervention programs.

Aim: To investigate the association between SOB and ADHD.

Materials and methods: SOB were examined in a clinical sample of 474 children (73% boys, 27% girls), born between 1990–2000 (mean age = 9.85, SD = 2.7), diagnosed as having ADHD by means of Diagnostic Interview of Children and Adolescents (DICA), DSM-IV checklist, and the clinical judgment of a child psychiatrist and a general psychiatrist, referred between 2001 and 2004 to 4 child and adolescent psychiatric clinics located in different zones of city of Tehran, and the results were compared with the SOB of live-born children in the same period, gathered from Iran census data.

Results: The sample included 70% mixed type, 15% inattentive type, and 15% hyperactive-impulsive type of ADHD, and they had comorbidities with OCD (48.3%), learning disorders (19%), enuresis (13.5%), and tic disorders (10.8%). There was not any significant difference in SOB variations between this clinical sample of ADHD children and that of the general population ($P_v = 0.788$).

Conclusion: Although the possibility of a relation between SOB and some neurodevelopmental disorders can not be ruled out, our findings

showed little evidence that SOB is associated with ADHD. Considering that seasonality may be sensitive to the selection of time cut-points, further studies are warranted.

Keywords: ADHD, season of birth, Children, neurodevelopmental disorder.

P01-54

Voluntary work with ADHD children as psychosocial and psychoeducational intervention

Suzovic, Vesna¹; Marusic, Radmila²; Simovic, Tatjana³

¹Primary Health Care Center Zemun, Department for Mental Health, Serbia; ²Center for Voluntary Work and Children's Help "Duga" ("Rainbow"), Serbia; ³Institute of Public Health, Krusevac, Serbia

The aim of the study was to examine the impact of voluntary help on academic achievement and discipline problems in children with attention deficit and hyperactivity disorder. Twenty eight children in elementary schools were clinical diagnosed in Primary Health Care Centre Zemun-Department for Mental Health. Young volunteers, children of 7th and 8th grade, and students of Faculty for Special Education and Rehabilitation, worked weekly for houer and half after school. Those volunteers were the members of non-governmental and non-profit association Center for Voluntary Work and Children's Help "Duga" ("Rainbow") witch specialized in organizing and implementing psychosocial, voluntary and education projects, with the aim of improving the quality of children's life. Volunteers helped children in learning disabilities-homework reading, writing, exercises on specific deficits and problems in discipline (training for control and modifying the problems in discipline: reward system-positive reinforcement, evaluating-determine the cause, technique for social interaction). The two third of the children the end of the school year had a better academic achievement and reduced discipline problems than before. Volunteers help is related to academic achievement and discipline problems in generally. It appears to be significantly influenced independent of intelligence or abilities to learn.

P01-55

Evaluation of theory of mind in children with attention deficit-hyperactivity disorder compared with control group

Tehrani-Doost, Mehdi¹; Mohammadzadeh, Azar²; Khorrami, Anahita²

¹Tehran University of Medical Sciences, Child and Adolescent Psychiatry, Islamic Republic of Iran; ²Institute for Cognitive Science Studies, Neuropsychology, Islamic Republic of Iran

Introduction: Theory of mind (TOM) has been described as the ability to understand others' mental states. One of the main aspects of theory of mind is intentionality which refers to people's intentions in their behaviors. Several studies suggest that children with attention-deficit/hyperactivity disorder (ADHD) have some impairment on TOM tasks. There is no evidence addressing the issue of intentionality in children with ADHD. The aim of this study was to investigate intentionality in children with ADHD using the Movement Shapes Paradigm.

Methods: Thirty children with ADHD were compared to thirty ages and IQ matched typically developing children. All participants were

assessed using the modified version of Moving Shapes Paradigm. All animations which are two triangles were presented between 34 and 45 s. Then participants were asked to describe the movements of triangles according to what they understand in terms of actions, interactions, and mental states. Children's answers were rated according to the accuracy, type of applying descriptions, using of mental states and emotional words, and length of phrase. The scoring reflects the degree of intentionality.

Results: ADHD patients showed significant differences in terms of intentionality, appropriateness and length of phrases in all TOM tasks compared to normal children. According to intentionality score, ADHD children performed worse than control group ($P < 0.05$). Based on appropriate score the accuracy of their answers was lower than control group, and children with ADHD use longer phrases compared to control group. Of emotional words which were used by ADHD patients 41.9% were negative in comparison with 33% of normal children's.

Conclusion: According to findings of this study ADHD children have poorer theory of mind especially intentionality compared to normal children and this deficit may reflect their impairment in social interaction.

Keyword: Theory of mind, Intentionality, ADHD, Movement shapes.

P01-56

Age dependent effects of atomoxetine—chronic treatment causes differential alteration of monoaminergic transporters and postsynaptic proteins

Udvardi, Patrick T.¹; Liebau, Stefan¹; Dreyhaupt, Jens²; Fegerl, Jörg M.³; Böckers, Tobias M.¹; Ludolph, Andrea G.³

¹University of Ulm, Anatomy and Cellbiology, Germany; ²University of Ulm, Institute for Biometry, Germany; ³University of Ulm, Child and Adolescent Psychiatry, Germany

Background: Although the efficacy and safety of atomoxetine is well investigated in clinical trials, the underlying mechanism of its effect still remains elusive. Existing *in vitro* results prove that besides the well-known inhibition of the norepinephrine transporter (NET) atomoxetine, a psychotropic substance used in the pharmacotherapy of attention-deficit/hyperactivity disorder (ADHD), acts as an open-channel blocker at the N-methyl-D-aspartate receptor (NMDAR) (Ludolph et al., 2010).

Aims: Here we present an *in vivo* study carried out to investigate atomoxetine's effect on the developing and the adult rat brain.

Methods: Pregnant Sprague Dawley rats were treated with atomoxetine (3 mg/kg, i.p.) and sodium chloride (0.9%, i.p.) respectively. The study was conducted on E12 to E19 thus covering a treatment period equivalent to the human second to third trimester of pregnancy. After the end of treatment male fetuses (E19) and dams were cerebrectomised. Hippocampus, prefrontal cortex, mesencephalon and the striatum were analyzed due to gene-expression and protein-level respectively. We focused our investigations on monoaminergic transporters, NMDAR subunits and members of the postsynaptic density.

Results: Our *in vivo* study revealed no significant alterations in gene-expression of the tested genes neither in the fetal nor in the adult rat brain. Nonetheless we found significant changes of protein-level of monoaminergic transporters, NMDAR subunits and several scaffolding proteins of the postsynapse.

Conclusion: Gene-expression analysis indicates that atomoxetine does not affect transcriptional regulation of our tested genes. Although

several proteins encoded by those genes seem to be altered after atomoxetine treatment. Since proteins of the postsynaptic membrane and density are affected as well, we conclude that besides the inhibitory action at the NET, mechanisms influencing proteins at the postsynapse might play a major role in the clinical effect of atomoxetine.

P01-58

Non-shared environmental effects of birth weight on ADHD symptoms persist into early adolescence. A 10-year longitudinal twin study

Greven, Corina¹; Ronald, Angelica¹; Plomin, Robert¹; Rodriguez, Alina²

¹King's College London, Institute of Psychiatry, Social, Genetic and Developmental Psychiatry Centre, UK; ²Uppsala University, Department of Psychology, Sweden

Background: Markers of poor fetal development, especially low birth weight, have been associated with attention-deficit hyperactivity disorder (ADHD). However, genetic factors may underlie this association, as the same genes may be involved in low birth weight as well as ADHD.

Aim: This study examines whether birth weight is associated with ADHD symptoms using a monozygotic (MZ) twin differences design to isolate non-shared environmental influences from genetic and shared environmental factors.

Materials and methods: ADHD symptoms in up to 5,200 MZ twins from the UK population-representative Twins Early Development Study were rated by parents (ages: 2, 3, 4, 7, 8, 9, 12 years) and teachers (ages: 7, 9, 12 years). Twin birth weight was obtained via parent report when the twins were 18–24 months old.

Results: Birth weight and ADHD symptoms were negatively associated. Within MZ pair comparisons revealed that the lighter twin in a pair had, on average, more ADHD symptoms than the heavier co-twin, suggesting that the association between birth weight and ADHD symptoms was non-shared environmentally mediated. Neither gestational age, gender nor socio-economic status moderated this non-shared environmental association. Effect sizes were generally stronger for more discordant twins and for parent than teacher rated ADHD symptoms. Although effect sizes were small, the magnitude of the associations was consistent over a 10-year period spanning ages 2–12 years.

Conclusion: Results suggest that poor fetal development, as evidenced by lower birth weight in relation to the co-twin, is a non-shared environmental risk factor for ADHD symptoms, with influences that persist into early adolescence.

P02-01

Development of childhood physical aggression into aggressive traits in adulthood: involvement of HTR1B

Hakulinen, Christian¹; Jokela, Markus²; Hintsanen, Mirka²; Merjonen, Päivi²; Seppälä, Ilkka³; Lyytikäinen, Leo-Pekka³; Lehtimäki, Terho⁴; Kähönen, Mika⁴; Raitakari, Olli⁵; Viikari, Jorma⁵; Keltikangas-Järvinen, Liisa²

¹University of Helsinki, Institute of Behavioural Sciences, Finland;

²University of Helsinki, Finland; ³Tampere University Hospital,

Finland; ⁴University of Tampere, Finland; ⁵University of Turku,

Finland

Background: Serotonin system is involved in the regulation of aggressive behavior, and previous molecular genetic studies suggest that the serotonin receptor 1B (HTR1B) genotype is associated with physical aggression. We examined the continuity of childhood physical aggression to aggressive traits in adulthood, and whether the HTR1B is associated with these aggression phenotypes.

Methods: The participants were 967 women and men from a large population based sample with a 27 year follow-up. Childhood physical aggression was reported by the mother when the participants were 3 to 12 years of age. Aggressive traits (anger, impatience–aggression and irritability) were self-reported by the participants between ages 24 and 36.

Results: Childhood physical aggression showed weak stability to aggressive traits in adulthood. HTR1B SNP rs6296 was associated with childhood physical aggression but not with aggressive traits in adulthood. The HTR1B SNP rs6296 did not modify the association between childhood and adult aggressive traits.

Conclusions: HTR1B genotype is associated with childhood physical aggression but not with aggressive traits in adulthood. The continuity of childhood physical aggression to aggressive traits in adulthood is only modest.

P02-02

Treating tinderbox kids. Treating severe emotional dysregulation and aggression in children and adolescents

Sankar, Sachin¹; Job, Ashwin²; Okoye, Albert³

¹Northamptonshire Healthcare Trust, The Sett, UK;

²Northamptonshire Healthcare Trust, CAMHS, UK; ³Alpha Hospital Working, UK

This workshop explores techniques of managing children with poor emotional regulation. It looks at diagnostic rubrics leading to severe emotional dysregulation, psychological and pharmacological therapeutic techniques to enhance emotional regulation reduce aggression. Aggressive behavior, unprovoked anger and tinderbox children is often the presenting problem and the symptom most affecting the quality of life of not only the index child but of the whole family of the child. Problems permeate into other systems the child is apart of. In recognition of this the most urgent requests for intervention is for help in emotional regulation Speaker-Dr Sachin Sankar abstract title-Diagnosing severe emotional Looks at diagnostic Rubrics including “Severe Mood Dysregulation” and the interplay off symptoms associated with attachment disorders, social communications skills impulsivity leading to an inability to control of emotion. The talk will also look at how diagnosis has changed over time and looks at the proposed changes with the upcoming publication of the DSM V the talk also looks at tools used for diagnosing the following conditions (a) autism Spectrum Disorders, (b) learning disability, (c) conduct disorders, (d) ADHD Substance misuse, (e) Emergent personality disorders Speaker-Dr Ashwin Job abstract title-pharmacological interventions in emotional Dysregulation Looks at pharmacological interventions in aggression and emotional dysregulation. Discusses the pitfalls and limitations of following a medical model of treatment also looks at increasing emotional resilience through treatment of co morbid symptom Speaker-Dr Albert Okoyae abstract title psychosocial interventions in children with problems of emotional regulation Role of family and Culture in developing interventions for teaching emotional regulation. The talk looks at evidence based interventions in patient settings in children who are deemed to be at high risk. The talk will also look at risk stepping up and down risks.

P02-03

Adolescent-victim of perpetrator

Curcic, Vojislav¹; Brzev Curcic, Vesna²

¹KHC “Dr Dragisa Misovic-Dedinje”, Belgrade, Psychiatric Hospital, Serbia; ²Psychological Circles, Serbia

This paper examines phenomena of violence under specific circumstances of crisis in Serbia during last 20 years. Growing up in Serbia in this period meant being exposed to violence as a dominant social pattern. Violence was a part of adolescents’ everyday life, through growing family and peer violence. Adolescents were deeply involved in violence, either as perpetrators, or as victims. Government institutions and NGOs conducted several research projects into connection of adolescent violence and living in a, what can be called, violent society and the results will be discussed. Beginning of the 1990s was marked by disintegration of former Yugoslavia. Country broke down in a civil war. War soon introduced economic crises that further led to overall social crisis. Institutions like family and educational system were losing authority. Political, religious and national differences and conflicts dominated every aspect of life. War created public figures that were on the one hand heroes of war, and on the other criminals who profited from the war. Media significantly contributed to expansion of violence as accepted pattern of behavior by further blurring the difference between a hero and a criminal in an ongoing glorification of these figures. NATO bombing caused many specific reactions of adolescents, among them intense aggressive phantasies. The process of transition caused many new frustrations and therefore created a new ground for adolescent violence. This paper will give some explanations of phenomena of growing violence and its most aggressive forms, both from developmental and psychodynamic point of view. Violence will be explored through the context of mutual relationship between adolescents and society and intrapsychic development, both normal and psychopathologic. The phenomena of victim with all its consequences on development and further functioning of adolescents will be also discussed.

P02-04

Pathway between perception of hostility and aggressive responses of victims in Chinese Secondary Schools

Li, Xiang; Fung, Annis Lai-chu

City University of Hong Kong, Hong Kong, People’s Republic of China

Background and aims: This study examines the pathway between perception of hostility and aggressive responses of children who are victimized by their peers. Perception of hostility means children hostilely attribute others intentions. Children’s hostility is easily aroused by their narcissism traits when they suffer victimization. Reacting with hostility-driven, children are inclined to show aggressive behaviors. In addition, victim’s hostile perception will cause their mood disorders such as depression and emotional lability.

Materials and methods: 1814 students from seventh and eighth grades of four secondary schools in China are recruited into sampling process, and 292 students are identified as victims based on two screening tools of Reactive-Proactive Aggression Questionnaire and Multidimensional Peer-Victimization Scale. We use students’ self-reported questionnaire to measure referred indicators including

children's victimized experience, depression, emotional ability, narcissism traits, and aggressive responses.

Results and conclusions: Based on pathway analysis, a significant regression of aggressive responses on perception of hostility is observed ($B = .345$, $\tilde{N} < .001$). Moreover, victim's perception of hostility leads to depression and emotional lability, and further enhance the likelihood of child conducting aggressive responses (Sobel test for depression $Z = 2.613$, $\tilde{N} < .01$; for emotional lability $Z = 2.922$, $\tilde{N} < .01$). In addition, with victims' scores on narcissism traits higher, the relationship between children's perception of hostility and aggressive responses is exacerbated and strengthened ($R^2 = .061$, $\tilde{N} < .001$). It is noteworthy that most family only have one child due to one-child policy in China, children get overmuch attention in family and they are inclined to believe they are extraordinary. In this case, Chinese children with perception of hostility would incline to adopt aggressive responses under the moderating effect of narcissism traits.

P02-05

Psychiatric wards crowding and incidents of aggression and violence

Mahmoudi, Azam; Motamedi, Babak

Islamic Azad University, Dehahan Branch, Nursing, Islamic Republic of Iran

Objective: Violence in psychiatric wards is common, and it is on the rise. This study examined the relationship between ward occupancy level and staff-to-patient ratio and incidents of aggressive behavior, both physical and verbal, on an acute inpatient unit in Iran.

Methods: Logistic regression was used to analyze data collected from the ward's log of adverse incidents and the ward census over a 12-month period. A physical incident was defined as an unwelcome physical contact or willful damage to property. Incidents of self-harm were excluded. Verbal aggression was any threat of physical or sexual harm.

Results: Among 381 admissions during the study period, 58 incidents were recorded—25 incidents of verbal aggression and 33 incidents of physical violence. Logistic regression demonstrated that the occupancy level was positively associated with the occurrence of any type of violent incident. The average occupancy level when an incident occurred was 77%, compared with 69% when no incidents occurred. The average occupancy level was significantly higher when verbal incidents occurred (80%) than when physical incidents occurred (70%). No association was found between violence and staff-to-patient ratio. Incidents were significantly more likely to occur during the afternoon shifts (3 p.m. to 11 p.m.).

Conclusions: Crowding was found to be significantly associated with aggressive incidents, and in particular with verbal aggression.

P02-06

The frequency and types of aggressive and violent behaviors in acute psychiatric inpatient settings

Motamedi, Babak

Islamic Azad University, Dehaghan Branch, Nursing, Islamic Republic of Iran

Objective: To determine the frequency and types of aggressive and violent behaviors in acute psychiatric inpatient settings and potential interactions between staffing and patient mix and rates of the behaviors were explored.

Methods: Data on violent incidents were gathered prospectively in two acute psychiatric units in two general hospitals and two units in a psychiatric hospital in Isfahan, Iran. For this study, aggression was defined as any threatening verbal or physical behavior directed toward self or others. Violence was defined as any physical behavior that resulted in harm to self or others. Staff recorded violent and aggressive incidents by using Morrison's hierarchy of aggressive and violent behavior. The classification ranged from level 1, inflicted serious harm to self or others requiring medical care, to level 8, exhibited low-grade hostility. They also completed weekly reports of staffing levels and patient mix. Regression analysis was used to calculate relative rates, 95% confidence intervals, and p values.

Results: A total of 400 violent incidents were recorded over a three-month period. Based on the scale, more than 50% of the incidents were serious. Seventy-eight percent were directed toward nursing staff. Complex relationships between staffing, patient mix, and violence were found. Relative risk increased with more nursing staff (of either sex), more non nursing staff on planned leave, more patients known to instigate violence, a greater number of disoriented patients, more patients detained compulsorily, and more use of seclusion. The relative risk decreased with more young staff (under 30 years old), more nursing staff with unplanned absenteeism, more admissions, and more patients with substance abuse or physical illness.

Conclusions: Violent incidents within psychiatric facilities were frequent and serious, with great significance for occupational health. Some clues were found in the prediction of violence.

P02-07

Determining aggressive behaviors and contributing factors among adolescents in Secondary Schools in 17 district of Tehran

Noktehdan, Haydeh

School of Nursing and Midwifery of Tehran University of Medical Sciences, Community Health Nursing Education, Islamic Republic of Iran

Background: Aggressive behaviour among adolescents has become a major public health problem. Adolescent aggression is an important focus for educators and parents owing to its relative stability over time and consistent link to a variety of negative outcomes later in adulthood. It is important to recognize the high risk group in school and contribution factors to their aggressive behaviors before designing and implementing any interventional program for addressing this kind of health issue.

Aim: The aim of this study was to determine contributing factors to aggressive behaviors among adolescents.

Methodology: The study included 933 first to thirds' grades pupils from 3 secondary schools. The selection was done through random stratified cluster sampling. The pupils were asked to complete an anonymous structured questionnaire (with two part: demographic data and aggressive behaviors) during the class time. The results were analyzed by descriptive and analytical statistical methods.

Results: About 51% of students had aggressive behaviors and the results demonstrated significant relationship between some

contributing factors such as: aggression and age, family size, employment status of parents ($p = 0.03$), level of educational grades and experience of critical events during the past 6 months ($p = 0.01$), the person who lives with ($p = 0.02$), parenting violence, marital status of parents, income level of family, history of witnessing insults other member of the family, watching aggressive programs on TV or film, performing violence plays or having aggressive thoughts in mind ($p = 0.00$).

Conclusion: According to results aggressive behaviors are common among the pupils in secondary schools. It is necessary to be implemented a comprehensive educational program (such as lifestyle skills) and providing effective psychological counselling in the schools.

Keywords: Aggressive behaviors, adolescent Co authors: Mrs. Dr. Tagavi and Mrs. Jamshidi from School of Nursing and Midwifery of TUM.

P02-08

Aggression in two age groups of youth with Adjustment Disorders, characteristics and therapy

Ristic Dimitrijevic, Radmila¹; Lazic, Dijana²; Nenadovic, Milutin³; Puskas, Laslo⁴

¹Special Hospital for Mental Disorders “Dr. Laza Lazarevic”, Counseling Service, Serbia; ²Special Hospital for Mental Disorders “Dr. Laza Lazarevic”, Outpatient Service, Serbia; ³Special Hospital for Mental Disorders “Dr. Laza Lazarevic”, top manager, Serbia; ⁴University of Belgrade School of Medicine, Institute of Anatomy, Serbia

Objectives: Comparison of type and level of aggressive tendencies in the two age groups of young people with the diagnosis of Adjustment Disorder, a group of 16–19 years (adolescents) and a group of 20–26 years (postadolescents). Also, an examination of the treatment of choice in these two groups.

Sample: 100 young people aged 16–26 years treated in Counseling Service, 46 adolescents and 54 postadolescents.

Methods: Standard psychiatric examination, standard battery of psychological tests.

Results: Younger respondents were significantly more verbally aggressive than older ones. Examined young men were significantly more aggressive than girls. Statistically significant correlation was found between verbal aggressiveness and the following characteristics: low frustration tolerance (LFT), physical aggression, suicide attempts and substance abuse. No statistically significant association between psychotic potential and attempted suicide. All patients were treated with psychotherapeutic methods. Younger respondents were significantly more often treated with psychotherapy only, and significantly less commonly prescribed antidepressants and their anxiolytic, compared to the older group. Subjects with elevated verbal aggression more often were prescribed antipsychotics and mood stabilizers.

Conclusion: Aggressiveness, as maladaptive pattern of behavior of young people, not necessarily caused by a psychotic reaction, but greater vulnerability. LFT common finding shows that they react violently to frustration, such as: excessive control, imposing the will of parents, requirements for school success and academic achievement, unemployment, chronic conflict family atmosphere, traumatic experiences, violence, war, exile, social crisis. Psychotherapy and pharmacotherapy are carefully selected to complement each other in respect of each adolescent individually, but in line with the motivation, knowledge and technical conditions for the work of psychiatrists.

P03-01

Effect of cognitive behavioral therapy with problem solving skills training on reduction of symptoms of test anxiety in high school girls

Baezzat, Fereshteh¹; Izadifard, Razieh²; Sadinam, Mohsen³

¹Mazandaran University, Social and Human Sciences, Islamic Republic of Iran; ²Shahid Beheshti University Tehran Iran, Psychology Dept., Islamic Republic of Iran; ³Mazandaran University Babolsar Iran, Islamic Republic of Iran

Objective: In this research, the effect of cognitive behavioral therapy with problem solving skills training on reduction of symptoms of test anxiety in high school girls has been taken.

Method: This research method is a kind of experimental research (pretest–posttest with control group). The community of statistical consists of the whole students from one to third grade of high school of Fereydoonkenar (The city in the North of Iran-Mazandaram). In order to do the research, first of all thirty students with test anxiety disorder took identical tests (Test Anxiety Inventory), and then they were chosen randomly according to simple sampling method. The evaluated sample was then randomly divided into two experimental and control groups. Experimental group received cognitive-behavioral therapy with problem solving skill training in 10 sessions but control group did not received any intervention. Data was analyzed through covariance analysis (ANCOVA).

Results: Research findings indicate that the symptoms of test anxiety of experimental group decreased in compare with control group.

Conclusion: Results indicate that cognitive-behavioral therapy with problem solving skills training is useful and efficient strategies for reduction of test anxiety and improvement of academic performance of Students with test anxiety. It is recommended that counselors, psychologists and teacher administer cognitive-behavioral therapy with problem solving skills training for the reduction of symptoms of test anxiety and improvement of academic performance of test anxious students.

Keywords: Cognitive behavioral therapy, problem solving skills, test anxiety, high school girls.

P03-02

Anxiety in prepubertal age: an epidemiological study concerning an Italian sample of 3479 nine-year-old pupils

Bomba, Monica¹; Gadda, Stefania¹; Maserati, Elisa²; Nacinovich, Renata²; Marfone, Mirella²; Broggi, Fiorenza²; Neri, Francesca²

¹University of Milan Bicocca, Dep. of Child and Adolescent Neuropsychiatry, Italy; ²University of Milan Bicocca, Italy

Background: Little is known about the occurrence of anxiety specifically in prepubertal age.

Aim: The epidemiology of anxiety was examined in a large sample of Italian prepubertal children, as the first phase of a study aimed at investigating the future potential development of personality disorders in the subjects at risk.

Materials and methods: 3479 Italian 9-year-old children were enrolled. SAFA-A Questionnaire was used to assess anxiety. Gender and familial characteristics were also considered to evaluate anxiety distribution in our sample.

Results: 10.5% of cases presented anxious traits. No significant gender difference was found, whereas 50% higher relative risk for anxious traits was found in children of separated couples when compared to children of cohabiting or married parents. Also the larger size of the family and the occupation of the mother as housewife were associated to anxiety in the offspring.

Conclusions: In preadolescence, gender does not seem to play a role in the occurrence of anxiety. The role of anxiety in prepubertal age and its possible connection to the development of personality disorders in adolescence are discussed.

P03-03

Maternal sensitivity, parental harshness and productive activity from infancy to adolescence: relations with anxiety at age 15

Bradley, Robert¹; Corwyn, Robert²

¹Arizona State University, School of Social and Family Dynamics, United States; ²University of Arkansas at Little Rock, United States

Background: Anxiety (ANX) often begins early in life and can become chronic (Comer and Kendall, 2004). Parental rejection and over-control have been examined as contributors to the disorder (Hale et al., 2006). However, few studies examine broader aspects of home experience from infancy onward, including factors that may foster a sense of self-control (SC), thus reducing the development of ANX.

Aims: This study examines how 3 aspects of home experience (maternal sensitivity, parental harshness, productive activity) from infancy to adolescence relate to ANX at age 15, using SC and blood pressure (BP) as potential mediators.

Materials and methods: Data were from the NICHD Study of Early Child Care and Youth Development (N = 1,364 from 10 sites in the US). Sensitivity was observed at 5 points from 6 to 54 months and at age 15. Productive activity and harshness were assessed 4 times from 6 to 54 months and at age 15 using HOME. SC and ANX were measured using adolescent and parent report. BP was measured at age 15. SEM was performed using early parenting measures and parenting at age 15, with paths to SC and BP through to ANX at 15.

Results and conclusions: All 3 parenting variables were related to ANX at age 15. SC showed a strong negative relation to ANX, but BP did not. Indirect paths from the 3 parenting measures through SC to ANX were significant. The overall model fit was good.

At age 15 we found that sensitivity, harshness, and productive activity were implicated in ANX. Part of the relation appears mediated through SC, but the direct paths suggest other likely mediator. Part of the strength of the relations may pertain to the high stability of each of the home processes examined. The overall pattern suggests that a diverse array of home experiences may contribute to adolescent anxiety, with implications that future research focus on both positive and negative factors so as to lay the groundwork for prevention and intervention efforts aimed at reducing anxiety.

P03-04

Epidemiology of anxiety disorders in a Spanish school population

Canals, Josefa¹; Hernández-Martínez, Carmen²; Cosi, Sandra²; Voltas, Núria²; Doménech, Edelmira³

¹Universitat Rovira i Virgili, Psychology, Spain; ²Universitat Rovira i Virgili, CRAMC, Department of Psychology, Spain; ³Universitat Autònoma de Barcelona, Health Psychology, Spain

The aim of this study was to assess the prevalence and other epidemiological data of anxiety disorders in a Spanish school population. A double phase epidemiological design was performed. A total of 1,514 students aged between 8 and 12 participated in the first phase. In the second phase, 562 (aged between 9 and 13) participants were selected as subjects at risk of mood and AD and their controls without risk. The SCARED was administered in the two phases of the study, DSM-IV diagnoses were made in the second phase using the MINI-Kid and the interferences was assessed using the CGAS. We have found and estimated prevalence of 15.9% (95% CI 14.1–17.7) for any anxiety disorder (without obsessive compulsive disorder neither specific phobia). The highest prevalence was for generalized anxiety disorder (7.2% (95% CI 5.9–8.5)) followed by social phobia (4.0% (95% CI 3.0–5.0)), separation anxiety disorder (3.2% (95% CI 2.3–4.1)) and panic disorder [1.4% (95% CI 0.8–1.9)]. Girls showed significantly higher prevalence than boys for any anxiety disorder, social phobia and generalized anxiety disorder. The prevalence of separation anxiety disorder significantly decreased with the age. A 34.3% of the children with any anxiety disorder presented homotypic comorbidity, an 11.6% showed comorbidity with major depression and a 16.8% with dysthymic disorder. In relation to interference, children with any anxiety disorder scored significantly lower in the CGAS (mean 73.4, SD 15.6) than children without diagnoses (mean 88.1, SD 17.2). In Spain, the prevalence of anxiety disorders in school population is high and similar to the rates of other countries. These results provide cross-cultural data and have implications for preventive interventions. Acknowledgements to the Ministry of Health (Instituto de Salud Carlos III-PI070839) for its economical support.

P03-05

Separation anxiety in childhood as a cause of school phobia

Dabkowska, Malgorzata Maria

University of Torun, Collegium Medicum, Department of Psychiatry, Poland

A separation anxiety comes from apprehension of being separated from the meaningful person, in most cases a mother. The distinctive feature is incompatibility with the developmental stage. Fear of separation appears with an unusual intensity and it lasts longer than expected for the typical age range. This leads to disorders in a child's social functioning. Separation anxiety can be a meaningful factor of school attendance reluctance. The aim of this publication was to evaluate school phobia risk factors as an expression of separation anxiety. The examined factors were of genetic, biologic and environmental kind. Toward understanding the functional profile of a particular child with school refusal behavior was examined ratings from child and parent versions of the School Refusal Assessment Scale (revised edition; SRAS-R). The SRAS-R is designed to measure the relative strength of the four functional conditions listed above and is typically given to the child (if appropriate) and to both parents. The study group consisted of 25 adolescents with school refusal behaviour (17 boys, 8 girls). The mean age in the group was 15 (SD = 1.4), ranging between 12 and 18.

Results: In 1/3 of children the direct factor leading to home leave reluctance was a death of meaningful person of their social background. In a comparative group the distinctive factor of the separation anxiety school attendance reluctant children was child's specific position within family (in 62% of the group members). 1/3 of comparative patients was single children in families and was members of

low numbered families. Treatment of separation anxiety requires cooperation among a psychologist a psychiatrist, the school, and parents, such treatment is a long-lasting process.

P03-06

Association of ADRA2a with early-onset obsessive compulsive disorder

Renner, Tobias¹; Phillip, Stephan¹; Weber, Heike²; Warnke, Andreas¹; Walitzka, Susanne³

¹University of Würzburg, Department of Child and Adolescent Psychiatry, Germany; ²University of Würzburg, Department of Psychobiology, Germany; ³University of Zürich, Child and Adolescent Psychiatric Service, Switzerland

Background: Early-onset obsessive compulsive disorder (OCD) is highly familial and previous studies found association with several candidate genes, indicating their involvement in the pathophysiology. Though most studies focus on genes of the serotonergic and dopaminergic systems, the norepinephrine system is discussed to have a major role in OCD, underlined, e.g. by the effective use of selective norepinephrine reuptake inhibitors in treatment.

Aims: In this study we aimed to investigate an association between the gene encoding the alpha2A-adrenergic receptor (*ADRA2a*), which is involved in the regulation of neurotransmitter release in the locus coeruleus and considered a key regulator in the interplay of the serotonergic and the norepinephrine systems.

Methods: The family-based sample includes 112 trios of German origin. Diagnosis was confirmed according to DSM-IV criteria. Genotyping included 3 tag single nucleotide polymorphisms (SNPs), spanning the gene. Genotyping was performed using standard PCR. Statistical analysis of *ADRA2a* single variants and haplotypes was calculated by Transmission Disequilibrium Test.

Results: After correction a trend for association between the promoter SNP rs1800544 ($p = 0.017$) and early-onset OCD was detected. Haplotype analysis confirmed significance for a rs1800544/rs11195419 haplotype after 10 k permutations ($p = 0.028$).

Discussion: To our knowledge, this is the first candidate gene study on *ADRA2a* in early-onset OCD. Association between early-onset OCD and a haplotype comprising a promoter and an exon SNP in *ADRA2a* in a family-based sample of German descent was detected. Interestingly, the promoter SNP rs1800544 was found to be linked to personality traits like harm avoidance and impulsivity, traits relevant in OCD.

Conclusion: Our results indicate a role of *ADRA2a* in the pathophysiology of early-onset OCD. Since its reported influence on response to pharmacotherapy, *ADRA2a* is an interesting target for pharmaco-genetic studies on OCD.

P03-07

Culturally-appropriate child anxiety assessment: Preliminary validation of the Asian children's anxiety scale in a community sample

Sung, Sharon¹; Haley, Charlotte¹; Woo, Bernadine²; Ooi, Yoon Phaik²; Fung, Daniel²

¹Duke-NUS Graduate Medical School and Child Guidance Clinic, Institute of Mental Health, Singapore; ²Child Guidance Clinic, Institute of Mental Health, Singapore

Introduction: Anxiety disorders are common in Asia, but Asian children often present with a different symptom profile than Europeans (e.g., greater somatic symptoms and academic/social concerns). There are few culturally appropriate anxiety measures for Asian youth, causing clinicians and researchers to rely on instruments that were developed and validated in Western samples.

Method: This study examined the psychometric properties of the Asian Children's Anxiety Scale (ACAS; Koh et al., 2002; 2008), a 20-item self-report scale for children aged 6 to 12 that includes culturally-relevant anxiety symptoms. The ACAS was administered to a community sample of 2,141 primary school students in Singapore. Students also completed the Multidimensional Anxiety Scale for Children (MASC; March et al., 1997) and the Children's Depression Inventory (CDI; Kovacs, 1992).

Results: The sample was 50.4% male with a mean age of 9.33 yrs (range = 6–15 years). The majority of participants were Chinese (74.9%), followed by Malay (16.1%), Indian (5.9%), and Other Race (3.1%). Internal consistency of the ACAS was high ($\alpha = .89$). Principal components analysis with varimax rotation revealed a two-factor structure that accounted for 42.8% of the variance. Factor 1 included 9 items reflecting fears about social and academic issues. Factor 2 included 11 items reflecting somatic symptoms of anxiety. Correlational analysis revealed significant positive associations with gold standard measures of anxiety and depressive symptoms. Consistent with its two factor structure, ACAS scores showed the strongest correlations with the following MASC subscales: physical symptoms, somatic symptoms, social anxiety, and humiliation fears ($r = .51-.57$).

Conclusions: This study provides preliminary support for the reliability and validity of a culturally relevant measure to assess anxiety symptoms in Asian youth. Additional work is needed to evaluate its performance in clinical samples and to determine suitable cutoff scores.

P03-08

The role of HLA genes in the etiology of childhood OCD and PANDAS

Yolga Tahiroglu, Aysegul¹; Karacaoglan, Gokhan²; Gul Celik, Gonca³; Avci, Ayse³; Bahali, Kayhan³; Umit, Luleyap²

¹Cukurova University Medical Faculty, Child and Adolescent Psychiatry Department, Turkey; ²Cukurova University Medical Faculty, Medical Biology and Genetic, Turkey; ³Cukurova University Medical Faculty, Child and Adolescent Psychiatry Department, Turkey

Pediatric autoimmune neuropsychiatric disorders associated with streptococcal infections (PANDAS) is characterized by a sudden onset of obsessive-compulsive disorder (OCD) and tic disorder following a group-A beta hemolytic streptococcal infection. HLA genes play a major role in the etiology of autoimmune disorders. This study has been planned to the theory that immune factors associated with HLA genes might have a role on the etiology of childhood OCD/PANDAS.

Method: The present study was performed on 90 children with OCD, and 38 healthy controls ranging in age from 4-12 years. HLA class I (A, B, C, DQB1) and II (DRB-1-3-4-5) haplotype were evaluated. Psychiatric diagnoses were made according to DSM-IV criteria and with KSAD-S-PL. CY-BOCS was used to evaluate the severity of OCD symptoms.

Results: Forty-one children with OCD were diagnosed as PANDAS; 49 of them as non-PANDAS (45.5%; 54.5%). The higher frequency of A3 allele was determined in OCD (27.8%; $p < 0.033$) and PANDAS groups (29.3%; $p < 0.038$) compared to controls (10.5%). Compared to controls (31.6%), B18 allele frequency was higher in total OCD (7.8%; $p < 0.001$), PANDAS (4.9%; $p < 0.002$), and non-PANDAS (10.2%; $p < 0.0013$) groups. B51 allele was more common in PANDAS group than non-PANDAS (39.0%, 12.2%; $p < 0.003$) and control groups (18.5%; $p < 0.044$), while there was no difference between non-PANDAS and control groups. DRB1–4 allele frequency was significantly lower in OCD group compared to controls (15.6%, 34.2%; $p < 0.018$).

Conclusions: This is first study which investigated HLA genes in the childhood OCD. Our findings suggest a possible role of HLA genes in the etiology of childhood OCD, and it may vary among cases with PANDAS and non-PANDAS. It should be investigated more thoroughly to better understand the etiology of OCD/PANDAS.

P04-01

Financial and social costs of Pervasive Developmental disorders (PDD) in Sardinia (Italy)

Anchisi, Laura¹; Testa, Manuela¹; Melis, Gianluigi²; Brunetti, Massimo³; Atzori, Paola¹; Zuddas, Alessandro¹

¹Child Neuropsychiatry, University of Cagliari, Neuroscience, Italy; ²Child Neuropsychiatry, Dept. Neuroscienze, University of Cagliari, Neuroscience, Italy; ³Centro per la Valutazione dell'Efficacia dell'Assistenza Sanitaria (CEVEAS), Modena, Italy

Aim: To evaluate the total direct (public and private) and indirect health costs associated with PDD.

Methods: Informations were collected by 99 PDD-parent questionnaire completed at two specialized Centres. Both public and private health costs, school costs, were considered. Loss of work and cost of time spent by families in patient care-giving were calculated as indirect costs. Age, diagnosis, gender, comorbidity, IQ, severity were considered as independent variables. The diagnosis was formulated according the DSM-IV criteria by ADOS and ADI-R. Cognitive ability was measured using Wechsler Scales and Leiter-R. Psychiatric comorbidities were assessed using the semistructured interview Kiddie-SADS-PL to parents. CPRS-14, C-GAS and CGI completed the basal assessment.

Results: Preliminary analysis indicated that median total cost of a PDD was € 27.611. Psychiatric comorbidities were associated to a significantly increase of total ($p = 0.023$, median € 27.421) and school costs ($p = 0.014$, € 8.400). Total costs were higher in Autistic Disorder ($p = 0.006$, € 24.494) and Asperger's Syndrome ($p = 0.012$, € 28.540) compared to PDDNOS (median € 15.008). At age 0–4 significantly lower total ($p = 0.042$, € 16.540) and school ($p = 0.003$, 0 €) costs were reported; school costs were significantly higher ($p = 0.024$, € 8.400) in age range 5–9. The presence of comorbidity was associated to a significant increase in total ($p = 0.023$, € 27.421) and school ($p = 0.014$, € 8.400) costs. Comorbidity with Disruptive Disorders was related to significantly higher total ($p = 0.002$, € 46.203) and school costs ($p = 0.008$, € 11.760).

Conclusion: To improve the allocation of economic and social resource, further studies are warranted to identify variables that influence PDD costs.

P04-02

Prevalence autism and autism spectrum disorders in Bosnia and Herzegovina in preschool children

Bajraktarevic, Adnan¹; Popovic, Sabina²; Tomic, Teo³; Omerovic, Samra⁴; Djokanovic, Dragan⁵; Prnjavorac Rakic, Besima⁶

¹Public Health Institution of Canton Sarajevo, Pediatrics Department, Bosnia and Herzegovina; ²Clinical Medical Center Sarajevo Psychiatry for Children, Pediatrics Department, Bosnia and Herzegovina; ³Pediatrics Clinic Mostar, Pediatrics Department, Bosnia and Herzegovina; ⁴Public Health Institution of District Brcko, Pediatrics Department, Bosnia and Herzegovina; ⁵Public Health Institution of Krajina, Banja Luka, Pediatrics Department, Bosnia and Herzegovina; ⁶Pediatrics Hospital Tesanj, General Pediatrics Department, Bosnia and Herzegovina

Introduction: Autism is a disorder of neural development characterized by impaired social interaction and communication, and by restricted and repetitive behavior. These signs all begin before a child is 3 years old. Treatment for autism is a very intensive, comprehensive undertaking that involves the child's entire family and a team of professionals.

Aim: The study also showed some geographic differences, with children with autism and ASD in the regions by wars consequences of Central Part of Bosnia or South Herzegovina comparing with no war problems as entity of Bosnian Krajina.

Methods: Presently, there is not a medical test for autism; a diagnosis is based on observed behavior and educational and psychological testing. Authors made investigations in all part of seven natural regions of Bosnia and Herzegovina from data of pediatrics offices in regional centers during first decade of twenty-first century for children in ages 4–6 years.

Results: The prevalence of childhood autism was 2.9 per 1000 (95% CI 1.3–5.8) and that of other Autism Spectrum Disorders was 5.4 per 1,000 (2.1–8.3), making the total prevalence of all ASDs 8.3 per 1,000 (3.4–14.1) depends from region in Bosnia and Herzegovina. The number of reported cases of autism increased dramatically in the end of twentieth century and early 2000s after war in Bosnia.

Discussion: Autism has a strong genetic basis, although the genetics of autism are complex and it is unclear whether ASD is explained more by rare mutations, or by rare combinations of common genetic variants.

Conclusions: Autism's symptoms result from maturation-related changes in various systems of the brain. The established therapies for autistic disorder are nonpharmacologic. These therapies may include behavioral, educational, and psychological treatment. Prevalence of autism and related ASDs is substantially greater than previously recognized in Bosnia and Herzegovina.

Keywords: Prevalence, autism, ASD, childhood.

P04-03

The neuropsychological profile of children with Asperger syndrome: performance on the NEPSY-II

Barron-Linnankoski, Sarianna¹; Reinvall, Outi¹; Lahervuori, Anne¹; Voutilainen, Arja²; Lahti-Nuutila, Pekka¹; Korkman, Marit¹

¹University of Helsinki, Department of Psychology, Finland;

²Helsinki University Central Hospital, Finland

Background: Asperger syndrome (AS) is a neurobiological developmental disorder belonging to autism spectrum disorders. Theory and research has proposed core cognitive deficits in AS to be impairment of central coherence leading to a tendency to focus on details, and of theory of mind skills. Difficulties in executive functioning have also been considered characteristic. However, the neuropsychological profile of children diagnosed with AS has not been widely studied.

Aims: The goal of this study was to compare the neuropsychological profiles of children with AS and typically developing children on NEPSY-II and to identify patterns of strengths and weaknesses in neuropsychological performance of children with AS.

Methods: Participants were 30 children with AS, aged 6–11 years. The control group consisted of 60 typically developing children, matched (two controls for each child with AS) for age, gender and mothers' educational background, randomly selected from the Finnish NEPSY-II normative study. The performance of the AS Group and Control Group was compared on the NEPSY-II, a comprehensive neuropsychological instrument.

Results and conclusions: Preliminary data analyses revealed significant group differences on 7 of the 16 NEPSY-II subtests, with the AS Group performing poorer than the Control Group. Overall, the results suggest that children with AS have impairment in the neuropsychological domains of attention and executive functioning (shifting and maintaining set), narrative and facial memory, and fine-motor abilities. Group differences were not significant in subtests of verbal comprehension, visuospatial processing without eye-hand coordination or social perception. Findings offer specification of the neuropsychological profile of children with AS. Previous findings of poor executive functions were supported. Problems with reproducing a narration may be interpreted as evidence for impaired central coherence. Support for poor theory of mind was not obtained.

P04-04

Group rehabilitation of interaction skills

Järvenpää, Silja¹; Bogdanoff, Päivi¹; Kurki, Pirjo-Liisa¹; Alenius, Miia²; Karpainen, Eila²

¹Oulu University Hospital, Finland; ²Deaconess Institute of Oulu, Finland

Objective: Children with Asperger's syndrome or some other neuropsychiatric disorder that impairs social interaction and communication constitute a special risk group for marginalization. Social difficulties have a profound disabling effect on these children and their families. Risk of marginalization can be greatly affected by early, directed therapeutic intervention.

Methods: These children have offered a group rehabilitation programme aimed at improving their interaction and communication skills. Each group was made as homogenous as possible with respect to age, cognitive ability and linguistic skill level. An important strand in this effort involved supporting parents in their parenting role through individual counselling and peer group sessions. Key rehabilitation objectives included supporting the social growth of the children, developing their interaction skills, supporting day-to-day activities and providing guidance to solving problem situations.

Results: The experiences gained and skills learned in group sessions have not only served to strengthen the self-confidence of both the children and their parents, but also provided them with new means and tools of coping with everyday challenges. Central factors that support and encourage rehabilitation are parental commitment, provision of support to children and a desire to change as well as the

homogeneity and continuity of the children groups. Everyone who felt having received peer support from the group also reported having benefited from programme.

Conclusions: On the basis of the experiences gained from the rehabilitation programme, it appears there are two favourable time periods and ages for rehabilitation. The first, preventive early intervention period, coincides with school start and entry into primary education. Later, occurring at early teenage, the second crucial time period provides corrective experiences and allows the child to rectify and strengthen his or her self-image as a participant in interaction.

P04-05

Diagnosis of autism spectrum disorder: France/Quebec comparison

Chamak, Brigitte¹; Bonniau, Beatrice¹; Masse, Andre²

¹INSERM U988, CNRS UMR 8211, CERMES3, Paris Descartes University, France; ²Montreal University, Hôpital Rivière-des-Prairies, Montréal, Canada

Aims: This study was undertaken to analyse the changes that have occurred in the category of autism, and the diagnostic process. We compared the current and past practices of professionals in France and Quebec.

Materials and methods: Quantitative and qualitative data were obtained from questionnaires filled by parents, in-depth interviews, and medical records: 248 questionnaires and 40 interviews in France, and 70 medical records in Montreal.

Results and conclusions: In both countries, increasingly earlier age at diagnosis was evidenced, as well as more frequent detection of the disorder and of milder forms of autism. From 1960 to 1990, autism was assimilated to psychosis and/or mental retardation and the terms used often caused parent distress. Compared with Quebec, the changes in the diagnostic process in France occurred later, due to the reluctance of certain professionals with a psychoanalytic background to adopt the new classifications of diseases. To a large extent, the changes are the result of pressure from parents' associations and public policies. Families today have less difficulty in obtaining the diagnosis of autism and the terms used are less hurtful. However, 63% of the French parents expressed dissatisfaction (Chamak et al. 2010). They complain about delays, and lack of information and help. In Quebec, only 25% expressed dissatisfaction (Poirier and Goupil, 2008) but 55% are not satisfied regarding the diagnostic process in Canada (Siklos and Kerns, 2007).

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P04-06

Kabuki Syndrome and Autism Spectrum Disorder

Dineen, Peter; Chakraborty, Rashmi

Oxfordshire and Buckinghamshire Mental Health Foundation Trust, Department of Child and Adolescent Psychiatry, UK

This is a literature review and case report on Kabuki Syndrome (Niikawa-Kuroki Syndrome) and features and signs of autism which may present with it. Kabuki Syndrome (also referred to as Kabuki-Makeup Syndrome) is a malformation syndrome characterized by distinct facial features considered to be similar to the Kabuki-style of Japanese drama. It is rare, with an incidence of around 1 per 86,000, although evidence suggests it may be underdiagnosed due to lack of awareness of the condition. We also present a case report of a child who has Kabuki Syndrome and also a range of autism features. While autism diagnoses may be more common in Kabuki Syndrome, the evidence available is based primarily case reports.

P04-07

Autistic spectrum disorder or early attention deficit/hyperactivity disorder?

Dobrescu, Iuliana¹; Rad, Florina¹; Nedelcu, Maria Cristina²; Trutescu, Carmen²; Ciobanu, Camelia²; Macovei, Simona²; Anghel, Gianina²

¹University of Medicine and Pharmacy “Carol Davila” Bucharest, Child and Adolescent Psychiatry Department, Romania; ²“Prof Dr Al Obregia” Psychiatry Hospital, Child and Adolescent Psychiatry Department, Romania

Background: In clinical practice frequent we meet children with polymorphic symptoms: delay in language development, deficits in social interaction, repetitive behaviours or interests, hyperactivity, major attention deficit, poor eye contact, idiosyncratic appetite, echolalia, stereotype play. All these symptoms lead to a lot of disagreement about nosological enframe: ASD (Autistic Spectrum Disorder) or ADHD (Attention Deficit/Hyperactivity Disorder) with autistic like symptoms?

Objective: To identify using a scientifically validated diagnostic tools the percentage of children with ASD in a sample with polymorphic symptoms described above.

Method: We evaluate a sample of 70 children 3–6 years old referred to Child and Adolescent Psychiatry Department, “Prof Dr. Al. Obregia” Psychiatry Hospital, Bucharest, Romania, for delay in language development, deficits in social interaction and repetitive behaviours or interests. For diagnostic we applied ADOS (Autism Diagnostic Observation Schedule) and ADHD RS (Attention Deficit Hyperactivity Disorder). The dates will be statistical interpreted.

Results and conclusions: The results are still in progress. From the preliminary dates we can conclude that only a small percent of these children with polymorphic symptoms can be considered ASD, the majority are ADHD with autistic like symptoms.

P04-08

Risk factors correlated with autistic spectrum disorders

Dobrescu, Iuliana¹; Rad, Florina¹; Ciobanu, Camelia²; Trutescu, Carmen²

¹University of Medicine and Pharmacy “Carol Davila” Bucharest, Child and Adolescent Psychiatry Department, Romania; ²“Prof Dr Al Obregia” Psychiatry Hospital, Child and Adolescent Psychiatry Department, Romania

Introduction: Autistic Spectrum Disorders (ASD) are neurodevelopmental disorders, the result of a complex interactions between genes

involved in brain development and environmental factors. ASD is frequent correlated with environmental factors acting in pre-, peri- and postnatal period, an extreme vulnerable period for brain development.

Objective: To identify possible risk factors correlated with ASD.

Method: We performed a retrospective study on a sample of 100 patients, 3–6 years old, diagnosed with ASD (based on ADI-R diagnostic tool) inpatient or outpatient in Child and Adolescent Psychiatry Department, “Prof Dr. Al. Obregia” Psychiatry Hospital, Bucharest, Romania. We followed the presence of risk factors in pre-, peri- and postnatal period: parent’s age, presence of a major psychic disorders at one of the parents, maternal exposure during pregnancy to alcohol, smoking or toxic substance, imminent abortion, caesarian section, hypoxia at birth, neonatal infections. The same risks factors were followed in a group of 100 children with typically development, similar at age and gender. Dates were statistical processed to evidence a possible connection between risk factors and ASD.

Results: The results are still in progress. From preliminary results we can conclude that risk factors described above occur more frequent in ASD sample.

P04-09

Differentiating autism spectrum disorders from attention deficit hyperactivity disorder and anxiety disorders

Fung, Daniel S. S.¹; Yoon Phaik, Ooi²; Rescorla, Leslie³; Sung, Min⁴; Ang, Rebecca P.⁵; Woo, Bernadine⁴

¹Institute of Mental Health, Child and Adolescent Psychiatry, Singapore; ²Institute of Mental Health, Child and Adolescent Psychiatry, Sierra Leone; ³Bryn Mawr College, United States; ⁴Institute of Mental Health, Singapore; ⁵Nanyang Technological University, Singapore

Background: There is growing interest in the diagnostic overlap between Autism Spectrum Disorders (ASD) and other disorders, such as Attention Deficit Hyperactivity Disorder (ADHD) and Anxiety Disorders. In previous studies, more than 10% of children with ASD met criteria for ADHD and Anxiety Disorders (de Bruin et al., 2007; White et al., 2009), and children with ADHD and Anxiety Disorders also presented elevated levels of autistic-like symptoms (Pine et al., 2008; Santosh and Mijovic, 2004). This report summarizes findings from two studies that tested the ability of the Child Behavior Checklist (CBCL; Achenbach, 1991) syndrome scales to differentiate between children with ASD, ADHD, and Anxiety Disorders.

Method: The sample included a total of 723 participants (between 4 and 18 years) diagnosed by their child psychiatrists using the ICD-9 and DSM-IV criteria to have either: (a) ASD (n = 86), (b) ADHD-Inattentive type (n = 117), (c) ADHD-Hyperactive and Impulsive type (n = 426), (or) Anxiety Disorders (n = 94). Archival data of participants’ CBCL measure were used.

Results: Analyses from logistic regression indicated that the withdrawn/depressed, social problems, and thought problems syndromes significantly discriminated the ASD group from both the ADHD groups. On the other hand, the anxious/depressed, somatic complaints, social problems, and attention problems syndrome scales significantly discriminated the ASD group from the anxiety group. A 9-item ASD scale (from the CBCL items) significantly differentiated children with ASD from children in the other diagnostic groups.

Conclusions: Findings from this study add an important contribution to the literature on differentiating ASD from other psychiatric

disorders and provide strong support for the CBCL as a screening tool for ASD.

P04-10

The comparative analysis of usage of CARS scale and ADIR

Garibovic, Emina; Pejovic Milovancevic, Milica; Popovic-Deusic, Smiljka; Aleksia-Hil, Olivera

Institute for Mental Health, child and adolescent, Serbia

Introduction: Strictly sticking to the criteria of diagnostic classification systems (ICD-10 and DSM-IV), we can not avoid coming to a high degree of subjectivity in diagnosing pervasive developmental disorders.

Objective: This paper aims to highlight the importance of using CARS scale and ADI-R in diagnosing pervasive developmental disorders.

Methods: These questionnaires were used with the group of 50 children aged 3 to 15 with suspected pervasive developmental disorder.

Results: The usage of CARS scale turned a possible diagnosis of developmental disorder from the autistic spectrum into determining the degree of autistic disorder—from normal to severely abnormal behavior, as opposed to ADIR whose criteria are more thoroughly defined and contribute to the more reliable diagnosing and differentiation of the autistic spectrum disorders. The comparison of the obtained results after testing the communication skills (verbal and nonverbal) has shown that with ADIR we can determine the level of these skills, while CARS scale can only detect abnormalities in communication.

Conclusion: The introduction of ADIR in diagnostic protocol of the Clinic for Children and Youth at the Institute of Mental Health has contributed to the definitive confirmation of disorders that were assessed as possible autism according to CARS scale. In addition to confirming the diagnosis, ADIR determines the level of autistic disorder more specifically and therefore the need, intensity and type of treatment.

Keywords: Pervasive developmental disorder, diagnosis, treatment

P04-11

Environmental factors in the pathogenesis of autism spectrum disorders

Garibović, Emina; Aleksia-Hil, Olivera; Pejović Milovančević, Milica; Mandić Maravić, Vanja; Kostić, Milutin; Miletić, Vladimir

Institute of Mental Health, Serbia

Little is known about environmental causes and contributing factors for autism. Recent findings, however, show that several environmental factors may contribute to pathogenesis of autism spectrum disorders (ASD), such as exposure to industrial pollutants, pesticides, heavy metals, precipitation and air pollution from traffic in urban areas, as well as advanced parental age at the time of conception, and maternal smoking during pregnancy. This study was designed to examine the association between possible exposure to one or several environmental factors during pregnancy and near the time of delivery, and the later development of ASD. Data was collected from 100 mothers with

children diagnosed with ASD. In addition, their addresses during pregnancy were compared to known levels of environmental pollution such as industrial toxins, agricultural toxins or air pollution in urban areas. Results show that effects of exposure to environmental toxins may be associated with autism spectrum disorders.

P04-12

Autistic spectrum disorders in children and adolescents with attention deficit hyperactivity disorder in a clinic-referred sample

Herguner, Arzu; Herguner, Sabri

Selcuk University, Meram Faculty of Medicine, Department of Child and Adolescent Psychiatry, Turkey

Introduction: Autism spectrum disorders (ASD) are characterized by impairments in social interaction and communication as well as repetitive and restricted behavior and interests. Attention deficit hyperactivity disorder (ADHD) is characterized by severe inattention, hyperactivity, and impulsivity. ADHD and ASD appear to often co-occur in families. Several studies reported that 30–80% of children with ASD meet criteria for ADHD and 20–50% of children with ADHD meet criteria for ASD. We aim to investigate the frequency of autism spectrum disorders in clinic-referred children and adolescents with ADHD.

Method: A consecutive series of 147 children and adolescents (mean age, 9.95 ± 3.02 y) with a diagnosis of ADHD according to DSM-IV criteria were included in the study. Fourteen cases (9.5%) were diagnosed as having a comorbid ASD (3 with autistic disorder, 3 with Asperger syndrome and 8 with atypical autism). Subjects with ASD plus ADHD were compared with subjects with ADHD without ASD. **Results:** Hyperactive-impulsive subtype was more frequent in ADHD plus ASD group. ADHD and ASD comorbidity was significantly associated with a higher rate of males. Frequency of psychiatric disorders was higher in ADHD and ASD group.

Discussion: Family and twin studies supported the hypothesis that ADHD and ASD originate from partly similar genetic factors. A screening for ASD should be performed in patients with ADHD, as these patients and their parents are frequently not aware that the impairment may be partly due to a comorbid ASD.

P04-13

Association between parental psychiatric history and autism spectrum disorders (ASD)

Jokiranta, Elina¹; Heinimaa, Markus²; Partanen, Auli¹; Brown, Alan³; Sourander, Andre¹

¹University of Turku, Department of Child Psychiatry, Finland;

²University of Turku, Department of Psychiatry, Finland; ³College of Physicians and Surgeons of Columbia University, Department of Psychiatry, USA

Background: Previous large population based studies have shown an association between autism and maternal and/or parental psychiatric disorder. However, only one of these (Daniels et al., 2008) have been able to examine specific psychiatric disorders separately among mothers and fathers.

Objective: The objective of this study is to examine the association between maternal and paternal psychiatric disorders and ASD.

Methods: Cohort includes all the children with ASD born in Finland between 1.1.1987–31.12.2005 and diagnosed until by 31.12.2007.

Information of parents inpatient care due to psychiatric disorders was collected from the Finnish Hospital Discharge Register. Each ASD case ($n = 5,019$) was matched to four controls ($n = 20,076$) according to date of birth (± 30 days), gender and place of birth. Data were analyzed by using conditional logistic regression.

Results: Overall 10.8% of mothers (OR 2.1 [1.9, 2.3]) and 11.8% of fathers (OR 1.6 [1.5, 1.8]) having a child with ASD had been hospitalized for psychiatric disorder while in controls 5.5% of mothers and 7.7% of fathers had some psychiatric disorder. Also 2.4% of case mothers (OR 2.5 [2.0, 3.1]) and 1.7% of case fathers (OR 2.2 [1.7, 2.9]) had been diagnosed with schizophrenia spectrum while in controls the respective figures were 1.0% in mothers and 0.8% in fathers. Also affective disorders were more common in case mothers (4.5%) (OR 2.1 [1.8, 2.5]) and case fathers (4.0%) (OR 1.8 [1.5, 2.2]) than in control mothers (2.2%) or fathers (2.3%).

Conclusion: The results of this study implicate that ASD is associated with mothers and fathers psychiatric disorders.

Reference:

- Daniels, J., Forssen, U., Hultman C., Cnattingius, S., Savitz, D., Feyerling, M., and Sparen, P. (2008). Parental psychiatric disorders associated with autism spectrum disorders in the offspring. -1362. *Pediatrics*, 121 (5), 1357

P04-14

Identifying and differentiating PDD-NOS: a comparison with autism and ADHD

Karabekiroglu, Koray; Akbas, Seher

Ondokuz Mayıs University, Child and Adolescent Psychiatry, Turkey

Purpose: We aimed to investigate differential features of pervasive developmental disorder- not otherwise specified (PDD-NOS) in terms of presenting symptoms, developmental history, and comorbidity with respect to autism and attention deficit hyperactivity disorder (ADHD).

Method: The study involved 188 children (PDD-NOS $n = 94$; ADHD $n = 47$; autism $n = 47$) (male $n = 150$, female $n = 38$) who were $5.5(\pm 2.5)$ years old on average (range 2–11 years). Preliminary PDD-NOS screening scale (PPSSS) was developed based on the ‘presenting’ symptoms of PDD-NOS that were systematically collected in a pilot group of children. The clinical diagnoses and comorbidities were based on the comprehensive mental status examination, Schedule for Affective Disorders and Schizophrenia for School Age Children-Present and Lifetime Version-Turkish Version (K-SADS-PL-T), and the consensus between two child and adolescent psychiatry specialists.

Findings: The prevalence rates of the most common presenting symptoms in the PDD-NOS and autism groups have shown a similar pattern of distribution from most common to the least, even when the results were corrected for age. However, almost all of these symptoms are reported significantly less in prevalence in the PDD-NOS group. Using subjects in all diagnostic groups ($n = 188$), a principal axis factor analysis with Promax rotation revealed ten factors; seven were found to be discriminative. In addition, another factor analysis revealed three factors: (1) “autism spectrum,” (2) “disruptive behaviors spectrum,” and (3) “anxiety spectrum.” The first two factors were found to discriminate between the diagnostic groups.

Discussion and conclusion: The results suggest that PDD-NOS may be assumed as a quantitative partial subtype of autism, and it represents a less severe form that lies on a continuum of social-communication skills.

P04-15

Co-occurrence of autism spectrum disorders and attention-deficit and hyperactivity disorder symptomatology in youngsters and adults

Papanikolaou, Katerina¹; Pehlivanidis, Artemios²; Giouroukou, Eleni³; Giachni, Aggeliki³; Efthimiadi, Margarita³; Dre, Vassiliki³; Mikelli, Anna³; Giannopoulou, Sophia³; Arabatzi, Marina³; Galanopoulos, Anastassios²; Kolaitis, Gerasimos¹

¹Athens University, Child Psychiatry, Greece; ²Athens University, 1st Department of Psychiatry, Greece; ³Agia Sophia Children’s Hospital, Child psychiatry, Greece

Background: According to current diagnostic criteria the diagnosis of autism spectrum disorders (ASD) remains in the exclusionary criteria for attention deficit and hyperactivity disorder (ADHD). However, high levels of clinical comorbidity have been reported between the two disorders. In addition, similarities in symptoms can lead to a misdiagnosis. The objective of this presentation is to pinpoint the occurrence of a misdiagnosis in a group of ASD youngsters and a group of ADHD adult patients.

Methods: This chart review examined data from all consecutive new cases referred to a children and young adolescents’ autism clinic and from consecutive ADHD patients referred to an adult ADHD clinic during year 2010. Diagnoses were based on DSMIV-TR criteria and semistructured interviews for young ASD patients.

Results: Of 77 youngsters with ASD, 33.8% fulfilled DSMIV TR criteria for ADHD; 47% of Asperger Syndrome (AS) cases and 30% of other ASD cases. 24% had previously received only an ADHD diagnosis with this rate being higher in AS patients. Of 50 patients referred to the adult ADHD clinic 10% received an Asperger syndrome diagnosis in addition to ADHD diagnosis for the first time in their lives.

Conclusions: In accordance to previous reports, the clinical comorbidity between ASD and ADHD is high. Many patients with ADS and especially with AS are initially misdiagnosed as having only an ADHD diagnosis. A better understanding of similarities and differences between the ADHD and AS symptoms would help in a better diagnostic classification and effective treatment of the patients.

P04-16

The importance of serum nerve growth factor (NGF) level in autism diagnosis

Kutlu, Ayse; Palulu, Nilgun; Dincel, Nida

Dr. Behcet Uz Children Hospital, Turkey

Background: Autism, which is a corruption in mutual social interaction, in both oral and not oral communication and characterised for repetitive behaviours is a neuroprogressive deterioration. However etiology is not known very well. In this study 49 sick children who were diagnosed for Autism and 49 healthy children, as a control group, were involved in the point of level of serum NGF and etio-pathogenetic and wanted to contribute prognostic researches. When we compare the level of NGF in patients who have delay in speaking, mental retardation and psycho pathological symptom with control group, it is very high.

Method: This study includes 49 children who applied and did not have a health problem and 49 children who were searched for autism

in Dr. Behcet Uz Children Hospital. From both group 2 ml blood samples were taken in and these samples were studied by using Chemikine brand NGF Sandwich ELISA KITS.

Results: Research group consists of (39% 79.5) male and 10 (20.4%) female autistic children. Age interval of research Group is 3–14 year and average age is 8.38 + 2.92 years. Age interval of control group is 1–14 years and average age is 7.34 + 3.48 years. An important difference was not observed between autism group and control group in the way of age. ($p > 0.05$). Data was analysed by using SPSS (version 12.0 for Windows Chicago) statistic program. In research group serum NGF values were determined as 46.94 + 12.48 pg/ml control group 32.9 + 12.4 pg/ml, values were evaluated in normal limits and when we compared in research group.

Conclusion: It is claimed that it can be a serologic factor for autistic children who show cognitive corruption and regression. Exploring the highness of NGF level in autistic children can be used in newborn period as predictive diagnosis, it is needed to use objective laboratory examination instead of subjective developmental evaluation and this is also very important for earlier diagnosis.

P04-18

An experimental study on the prominence of different prosodic features of spontaneous speech produced by youngsters afflicted with Asperger Syndrome

Lehtinen, Mari

University of Helsinki, Department of Modern Languages, Finland

So far, the prosody of persons with AS has been studied mainly within the fields of psychology and neurology with the help of mismatch negativity (MMN), which is a component of the event related potential, arising from the electrical activity in the brain (Korpilahti et al. 2007; Kujala et al. 2005). The results of the MMN studies suggest that people with AS have problems to recognise affective prosody. It has also been shown that people afflicted with AS have difficulties to produce affective prosodic patterns (Scott 1985), and that they often have a limited range of intonation (McPartland et al. 2006). Their speech may also be overly fast, jerky or loud, or it can be characterised by such features as large pitch excursions, quiet voice, prominent word stress and/or by creaky voice (McPartland et al. 2006). It has however not yet been studied how neurotypical persons perceive these features; in other words, to what extent do people without autism spectrum disorders find these features prominent. This has been the main objective of this small experimental study, carried about by methods of instrumental and experimental phonetics. The data was recorded in the winter 2009–2010 at the Autism Centre of the HUCH Hospital for Children and Adolescents in Helsinki. The data includes two therapy sessions with two different groups, where altogether seven 11–13-year-old Finnish-speaking boys talk with each other and with their therapists. Each participant had an own microphone behind his ear, which made it possible to get an own recording of each individual's speech. The acoustic features of the boys' speech were then analysed by methods of instrumental phonetics (speech analysis program 'Praat'). After this, 40 neurotypical Finnish-speaking subjects of different ages performed a 40-min-long perception test where they estimated their impressions concerning the prominence of different prosodic features of the AS boys' speech on the basis of brief sound samples.

P04-19

The use of contextual information in pragmatic language comprehension in children with Asperger syndrome or high-functioning autism

Loukusa, Soile¹; Leinonen, Eeva²; Jussila, Katja³; Mattila, Marja-Leena³; Kuusikko, Sanna³; Ryder, Nuala⁴; Ebeling, Hanna³; Moilanen, Irma³

¹University of Oulu, Faculty of Humanities, Logopedics, Finland;

²King's College, University of London, UK; ³University

and University Hospital of Oulu, Department of Child Psychiatry,

Finland; ⁴University of Hertfordshire, Department of Psychology, UK

Background: Asperger syndrome (AS) and high-functioning autism (HFA) are characterised by pragmatic impairments including difficulties in utilising contextual information and in integrating information from different sources in language comprehension. The purpose of this paper is to present some of the key findings of Loukusa (2007) and associated papers.

Aims: The study analysed whether two age groups of children with AS/HFA and normally developing control children differ in their ability (1) to answer different kinds of contextually demanding questions and (2) to explain their correct answers.

Materials and methods: The clinical groups consisted of 39 children diagnosed with AS or HFA by the paediatrician (M-LM) or the psychologist (KJ) by using ICD-10 criteria based on all gathered information (e.g. ADI-R and ADOS). These children were divided into two groups according to their ages, 7- to 9-year-olds ($n = 16$) and 10- to 12-year-olds ($n = 23$). Children's current linguistic ability was verified by three subtests of Nepsy (SK) and language tests. The control group consisted of 23 healthy 7- to 9-year-olds. All participants were asked questions targeting contextual comprehension involved in reference assignment, enrichment, routines and implicatures and understanding of feelings. Additionally, they were asked to explain most of their correct answers to elicit their awareness of their own understanding.

Results and conclusions: Compared to the control group, the younger AS/HFA group performed less well when answering contextually demanding questions, and the performance of the older AS/HFA group fell in between the younger AS/HFA group and control group. Both AS/HFA groups showed difficulties in explaining how they had used context in arriving at correct answers. The topic drifts after first giving a correct answer were the most typical for the younger children with AS/HFA suggesting that they had difficulties with stopping processing at a relevant point.

P04-20

Basic information processing in children with pervasive developmental disorders

Madsen, Gitte¹; Bilenberg, Niels¹; Oranje, Bob²

¹University of Southern Denmark, Research department for child-

and adolescent psychiatry, Denmark; ²Center for schizophrenia

research, Copenhagen University, Denmark

Background: Pervasive Developmental Disorder (PDD) is a diagnostic term covering a group of neuropsychiatric disorders marked

by a core triad of impairments consisting of qualitative disturbances in social interaction and communication, and by stereotypical behaviour. Some children diagnosed with PDD also suffer from disturbed thinking and anxiety. Studies have shown that 78% of a group of adolescents with PDD and disturbed thinking meet the criteria for ARMS (At Risk Mental State). ARMS is defined as a preliminary stage of schizophrenia with a high risk of developing schizophrenia within 6 to 12 months. Schizophrenia is characterised by disturbances in the brain's processing of information. One example of information processing is the brain's ability to gate or filter out stimuli, the so-called "filter function". Psychophysiological studies have shown, that patients with schizophrenia have reduced sensory motor gating measured by "P50 suppression" and reduced "pre-pulse inhibition of the startle reflex" (PPI).

Aims: 1. To compare basic information processing in children with PDD and a group of healthy controls. 2. To investigate whether it is possible, on the basis of outcomes of the psychophysiological tests, to differentiate sub-groups within the spectrum of PDD. 3. To compare potential subgroup within the spectrum of PDD with known schizophrenic subgroups.

Material and methodology: A case-control study consisting of two groups of children 8–12 years old matched as to age and gender: 1. Children diagnosed within the PDD spectrum ($n = 40$). 2. Normally developed children ($n = 40$). Both groups will be diagnostically clarified and both patients and healthy controls will take the PPI test and P50 suppression test.

Results and conclusion: Data collection is still going on, results and conclusions can there for not yet be presented. We hope this study will generate new insights about the background for PDD, as well as early detection of schizophrenia and its serious consequences.

P04-21

Narrative abilities of children with AS or HFA: a multi-case study

Mäkinen, Leena¹; Loukusa, Soile¹; Kunnari, Sari¹; Moilanen, Irma²

¹University of Oulu, Faculty of Humanities, Logopedics, Finland;

²University and University Hospital of Oulu, Department of Child Psychiatry, Institute of Clinical Medicine, Finland

Background: The ability to narrate is a crucial part of social interaction and communication which requires both pragmatic and linguistic aspects of language. So far narrative abilities of children with AS/HFA have not been studied in Finnish and the few English research findings have been somewhat conflicting (e.g. Losh and Capps, 2003; Norbury and Bishop, 2003; Young et al, 2005). However, previous studies show that AS/HFA children have difficulties in the social aspects of language, for example, pragmatic comprehension and inference abilities (Loukusa and Moilanen, 2010). Thus, it is possible that difficulties are also seen in pragmatic aspects of the narrative.

Aims: The purpose of this study is to assess narrative abilities of children with AS or HFA. Both linguistic structure and story content are studied.

Participants and method: The data of five Finnish speaking children with AS/HFA (mean age 7;1) and their controls are presented. The A3 story of ENNI (The Edmonton Narrative Instrument) was chosen as an elicitation task (Schneider, Dubé and Hayward, 2005).

Results: The AS/HFA children may have difficulties in some aspects of narration. Their story grammar scores were clearly poorer than their controls', which means that AS/HFA children included less relevant information in their stories. There were no clear differences between the groups in the linguistic measures (number of utterances and words, syntactic complexity; number of main and dependent clauses) although the control group performed somewhat better.

Conclusions: These results are preliminary and only suggestive due to the small number of participants and the great variance in the results in the AS/HFA group. However, the data shows that AS/HFA children's narrative abilities should be researched more carefully. It may be that the linguistic abilities stay intact but the demands of narration are seen in a more pragmatic aspect of the narrative: the story content.

P04-22

Efficacy of special early behavioral intervention (SEBI) in toddlers with autism spectrum disorders (ASD)

Martsenkovsky, Igor¹; Bikshaieva, Iana²; Vashenko, Olesya²; Kazakova, Svetlana³

¹Ukrainian Research Institute of Social, Forensic Psychiatry and Drug Abuse, Medical and Social Problem of Psychiatric Disorder, Ukraine;

²Ukrainian Research Institute of Social, Forensic Psychiatry and Drug Abuse, Medical and Social Problem of Psychiatric Disorder, Ukraine;

³Lugansk Medical University, Psychiatry, Ukraine

Background: ASD is a complex neurodevelopmental condition that present from as early as 12 months of age. The best outcomes for children are often achieved through early diagnosis and intervention.

Aims: This is the controlled study efficacy of SEBI in toddlers with ASD.

Materials and methods: Were examined 46 toddlers with ASD from 18 to 24-month-old. The investigation included: (1) Autism Diagnostic Interview-Revised (ADI-R), (2) Psychoeducational Profile Revised (PEP-R), (3) Vineland Adaptive Behavior Scales (Vineland-II). The children were separated into two groups, main (MG) that received 20 h a week of the SEBI-two control (CG). SEBI included stepwise, and in case of need, combination of several intervention: training of sensory stimulation, floortime therapy, behavioral intervention for undesirable behavioral patterns elimination. Our model uses what is called "floor time therapy" as a systematic way of working with a child to help him climb the developmental ladder; it is the heart of the developmental approach to therapy. Therapist takes a child back to the very first milestone he may have missed and begins the developmental process anew.

Results: At the conclusion of the study, the IQs in the MG had improved by an average of approximately 20 points, compared to a little more than 4 points in the CG. The MG also had a nearly 14-point improvement in receptive language (listening and understanding) compared to approximately 8 points in the CG. 15 ASD children in the main group had enough improvement in overall skills to warrant a change in diagnosis from autism to the milder condition known as PDD-NOS. Only one child in the CG had an improved diagnosis.

Conclusions: Health Ministry of Ukraine recommends that all 18- and 24-month-old children be screened for ASD. It is crucial that we can offer parents effective therapies for children in this age range.

P04-23 Psychotic disorders in adolescents diagnosed with autism spectrum disorders in childhood

Militerni, Roberto; Santoro, Elena; Ison, Claudia; Militerni, Guido

II University of Naples-Italy, Italy

Introduction: Ever since 1943, when Leo Kanner used the term autism to refer to a new condition involving “disturbance of affective contact”, the relationship between schizophrenia and Kanner’s autism has remained unclear. Recently, the emergence of some common family, genetic and imaging findings between Autism Spectrum Disorders (ASD) and Schizophrenia Spectrum Disorders (SSD) warrants further review and comment. The present study aimed to assess the pattern of symptom change over time in children diagnosed with Pervasive Developmental Disorders (PDD).

Methods: The subjects were recruited from outpatient and inpatient service of the Neuropsychiatric Unit of the Second University of Naples, Italy. Eligibility were determined by the following criteria: 1. age ranged from 6 to 8 years; 2. diagnosis of ASD based on the DSM-IV diagnostic criteria; 3. absence of associated medical conditions and/or complex syndromes. Eighty-eight children met inclusion criteria. The cohort was reassessed at age 16 years.

Results: At the age of 7 years, eighty-eight subjects were assessed: 35 with Autistic Disorder (AD), 12 with Asperger Disorder (ASP) and 41 with PDD-NOS. In the PDD-NOS were included ten subjects who met the criteria for a Multiple Complex Developmental Disorder (MCDD). At the age of 16 years, nine subjects showed psychotic disorders: 7 subjects with an initial diagnosis of MCDD and 2 subjects with ASP.

Conclusions: The construct of “spectrum” in extending the boundaries of either autism and schizophrenia made the diagnostic criteria weeks and sometimes undefined. So, during the childhood some conditions characterized by disorders of thought, such delusions or paranoid preoccupations, are frequently included into ASD. Prospective studies of large PDD and autism samples will be needed to answer the question of whether premorbid PDD is a risk factor for later-onset psychosis or whether a subgroup of PDD-NOS is a prodromal condition of a Childhood Onset Schizophrenia (COS).

P04-24 A population-based twin study on autism spectrum disorders

Nordenbaek, Claudia¹; Jørgensen, Meta²; Ohm Kyvik, Kirsten³; Bilenberg, Niels¹

¹Institute of Clinical Research, University of Southern Denmark, Dep. of Child- and Adolescent Psychiatry Odense, Denmark; ²Psychiatric Hospital for Children and Adolescents, Aarhus University Hospital, Risskov, Denmark; ³Institute of Regional Health Services Research, University of Southern Denmark, Denmark

Introduction: For decades, the aetiology of autism has been attributed substantial influence from additive genetic factors. Although few in number, twin studies have been a powerful tool in providing this evidence indirectly, as these studies are able to distinguish genetic and environmental influence on similarity within families. It is

important to perform twin studies based on recent diagnostic definitions and concepts to explore the influence of genetic and non-genetic factors to the aetiology of autism, especially since linkage and candidate gene studies have so far not been successful.

Methods: The heritability of Autism Spectrum Disorders (ASD) was estimated in an epidemiologically ascertained twin sample from the nationwide Danish Twin Registry by using a three-step procedure. Five items from the Child Behaviour Checklist (CBCL) were used in the first screening phase, while screening in the second phase included the “Social and Communication Questionnaire” (SCQ) and the “Autism Spectrum Screening Questionnaire” (ASSQ). The final clinical in-depth assessment was based on “gold standard” methods and according to the diagnostic criteria of DSM-IV-TR.

Results: The probandwise concordance rate for ASD was 95.2% in monozygotic (MZ) twins (n = 13 pairs) and 4.3% in dizygotic (DZ) twins (n = 23 pairs), the latter equalling the recurrence rate in siblings.

Conclusion: The results support a genetic aetiology of ASD.

P04-25 Relationship between parenting stress and anxiety of children with Autism Spectrum Disorders

Ooi, Yoon Phaik¹; Sung, Min¹; Goh, Tze Jui¹; Ang, Rebecca P.²; Fung, Daniel S. S.¹

¹Institute of Mental Health, Singapore; ²Nanyang Technological University, Singapore

Background: Previous studies have shown that parents of children with Autism Spectrum Disorders (ASD) are at increased risk of experiencing high levels of stress due to the nature of the disorder and other comorbidities that these children exhibit. This study examined the relationship between child anxiety and stress in parents of children with ASD.

Method: The sample included a total of 71 children (between 9 and 16 years) diagnosed to have Autism Spectrum Disorders (ASD) by their attending child psychiatrist. These children also met the criteria for Autism or Autism Spectrum on the Autism Diagnostic Observational Schedule (ADOS; Lord, Rutter, DiLavore and Risi, 2002). Parents completed the Spence Child Anxiety Scale-Parent (SCAS-P; Nauta et al., 2004) and the Parenting Stress Index (PSI; Abidin, 1990). The SCAS-P consists of six domains of anxiety: panic attack/agoraphobia, separation anxiety, physical injury fears social phobia, obsessive compulsive disorder, and general anxiety disorder. The PSI consists of the Parent Domain and Child Domain, and a Total Stress Index.

Results: A series of correlational analyses revealed significant relationship between child anxiety (all subscales on the SCAS-P) and Child Domain of the PSI. There was no significant relationship between child anxiety (except for panic attack and general anxiety disorder subscales) and Parent Domain of the PSI. Overall, child anxiety (except for social phobia subscale) was significantly correlated with parents’ total stress. According to Cohen (1988), all significant findings were suggestive of medium-to-large effect sizes.

Conclusions: Findings from our study suggest that higher levels of child anxiety were associated with higher levels of parenting stress. Specifically, stress experienced by parents of children with ASD was mainly associated with the specific needs of the child. These findings support the need for treatment programs on reducing parenting stress to focus on the child aspect.

P04-26 Intellectual functioning in patients with autistic spectrum disorders—the Serbian sample

*Pejovic Milovancevic, Milica¹; Mincic, Teodora²;
Radosavljev Kircanski, Jelena²; Mandic Maravic, Vanja²;
Kostic, Milutin²; Garibovic, Emina²; Aleksia-Hil, Olivera²*

¹Institute of Mental Health, Medical School, University of Belgrade, Serbia; ²Institute of Mental Health, Serbia

Background: Autism is commonly associated with general intellectual disabilities—approximately 75% of people with autism have lower IQ level than average population. Autism can also occur in individuals of normal, or even superior intelligence. Because of the nature of the disorder (age of onset is not necessarily the same as age of diagnosis) true incidence is difficult to determine. The aim of our study was to analyze the intellectual functioning of selected group of patient diagnosed as Autism spectrum disorders.

Methods: The sample consisted of 100 patients with autism spectrum disorders. The patients were diagnosed using the ICD-X criteria, ADI-R (Autistic Diagnostic Interview revised) and all were assessed either with WASI (Wechsler abbreviated intelligence scales) or Vineland II adaptive behavior scale depending on their verbal capacities, age and the willingness to cooperate in the examination.

Results: The results obtained from our sample showed that majority of our subjects had lower intellectual level than average population. According to the results on Vineland test, majority of the sample domain score profile were low in communication, socialization and daily living skills and better functioning in motor skills. According to the results on WASI, total performance IQ was lower than average in the same age population.

Conclusion: In our sample substantial number of subjects have lower IQ performance, mostly associated with severeness of clinical manifestation. The co-occurrence of autism and intellectual disabilities have substantial implication for prognosis and for nature and intensity of intervention required. Individuals with intellectual disabilities and autism are more likely to need far more individualized support, or specialized and more structured than those individuals with only intellectual disability.

P04-27 Cognitive predictors of adaptive behavior in children and adolescents with high-functioning autism spectrum disorders

*Puig, Olga¹; Calvo, Rosa²; De la Serna, Elena³; Lera-Miguel, Sara⁴;
Sanchez-Gistau, Vanessa¹; Castro-Fornieles, Josefina²*

¹Hospital Clinic of Barcelona. Child and Adolescent Psychiatry and Psychology Department, Grup de Recerca Consolidat (DIUE 2009), Spain; ²Hospital Clinic of Barcelona. Child and Adolescent Psychiatry and Psychology Department, Cibersam. Grup de Recerca Consolidat (DIUE 2009), Spain; ³CIBERSAM, Spain; ⁴Hospital Clinic of Barcelona. Child and Adolescent Psychiatry and Psychology Department, Spain

Background: Few studies have focused on cognitive variables other than IQ as potential predictors of adaptive behavior in high-functioning autism disorders (HF-ASD). This study aimed to analyze the impact of several cognitive variables on adaptive scores in HF-ASD.

Methods: 16 male out-patients with HF-ASD were included (M = 11.13 years, SD = 2.36). Cognitive domains were assessed as follows: IQ (Vocabulary and Matrix Reasoning subtests of Wechsler Intelligence scales for children-WISC-IV); visual-organizational abilities (Copy subtest of the Rey-Osterrich Complex Figure Test—ROCFT); visual memory (ROCFT immediate recall); verbal memory (immediate and delayed recall of TOMAL battery Memory of Histories subtests); processing speed (WISC-IV Digit Symbol subtest); working memory (WISC-IV Letter-Number Sequencing subtest); executive functions (total errors and total perseverative errors of the Wisconsin Card Sorting Test). The Parent/Caregiver Rating Form of the Vineland Adaptive Behavior Scales, 2nd edition was used to assess adaptive functioning, which measure adaptive behavior in differentiated domains: Communication, Daily living skills and Socialization.

Results: The communication domain was uniquely predicted by IQ, which explained 41% of variance (adjusted $R^2 = 0.41$, $F = 11.20$, $p = 0.005$). For the Daily Living Skills domain, verbal memory emerged as the main predictor explaining 36% of the variance (adjusted $R^2 = 0.36$, $F = 8.84$, $p = 0.011$). For the Socialization domain, verbal memory also emerged as the main predictor, explaining 34% of the variance (adjusted $R^2 = 0.34$, $F = 8.21$, $p = 0.013$).

Conclusions: The present findings highlight the strong impact of IQ and verbal memory on adaptive behavior in HF-ASD patients, for whom much daily living and social learning is done by rote. The findings could help focus rehabilitation efforts on the most influential factors interfering with actual day-to-day adaptive functioning.

P04-28 Altered activation to working memory task in young subjects with autistic spectrum disorder: a functional MRI study

*Rahko, Jukka¹; Vuontela, Virve²; Nikkinen, Juha³;
Carlson, Synnove²; Moilanen, Irma⁴; Kiviniemi, Vesa³*

¹Institute of Clinical Medicine, University and University Hospital of Oulu, Finland, Department of Child Psychiatry, Finland; ²University of Helsinki, Helsinki, Finland, Neuroscience Unit, Institute of Biomedicine/Physio, Finland; ³University and University Hospital of Oulu, Finland, Department of Diagnostic Radiology, Finland; ⁴University and University Hospital of Oulu, Finland, Department of Child Psychiatry, Finland

Background: It has been shown that subjects with ASD have altered visuospatial processing and memory processing capabilities. The purpose of the present study was to examine both behaviorally and with neuroimaging methods the difference between adolescent ASD and TD controls during working memory task.

Materials and methods: 30 adolescent ASD cases and 30 age and gender matched controls was assessed with multiple tests (DSM-IV). Resting and activation scans were imaged with GE 1.5 T, ASSET × 2, TR 1800 ms, TE 40 ms, flip angle 90, 64 × 64 matrix, FOV 25.6 cm, 28 4 mm slices. We investigated whether attentional processing (0-back) or more stronger task load (2-back) during working memory (WM) task is altered in ASD.

Results: The memory load and task effects (2-back vs. 0-back) areas are in the right temporal regions S1 and insula. The power of deactivations, i.e. task <baseline activity, outside the default mode network during 0-back task was stronger in the ASD group and the activations were reduced compared to TD controls. There were deactivation during 0-back task in the right precentral and postcentral

gyrus in ASD group. Activated areas were observed in the right Rolandic operculum, supramarginal gyrus and superior temporal gyrus.

Conclusion: Our results show the differences between groups were largest in the cerebellum and they dominated compared to the differences in cerebral cortex. The cerebellum was the only area which had alterations in both 2-back and 0-back tasks in comparison to baseline. This was thought to be due to altered salience processing in the right insular/frontal region. In 0-back condition, the controls activated the cerebellum more strongly in the cerebellum lobules I, VII, VIIIb and in lobule IX. During 0-back task the brain is already de-activated and activated in excess and during the higher task load there is no reserve to take from and then the system overrides and gives un-controlled motor responses.

P04-29

Depressive symptoms in Asperger Syndrome and high-functioning autism: prevalence and correlation with global functioning

Reale, Laura; Guarnera, Manuela; Ruta, Liliana; Mazzone, Luigi

University of Catania, Italy

Aim: To evaluate the prevalence of depressive symptoms in subjects suffering from Asperger Syndrome and high functioning autism and to detect the impact of these symptoms on global functioning.

Materials and methods: 28 males aged 8 to 15 with AS/HFA and 67 normal controls (NC) aged 10 to 13 were assessed with the Children's Depression Inventory (CDI). Participants' parents were invited to fill out the Child Behaviour Checklist (CBCL) and the Children's Depression Rating Scale (CDRS). Moreover, to measure global functioning and the functional impact of psychiatric/behavioral symptoms, the Developmental Disabilities Modification of Children's Global Assessment Scale (DD-CGAS) was assessed in AS/HFA group.

Results: The evaluation of depressive symptoms by CDI showed that AS/HFA group reported higher CDI scores (mean = 11.8, SD = 0.9) than NC (mean = 11.8, SD = 0.9, $p = 0.002$). Similarly, there were significant differences on CDRS scores between AS/HFA (mean = 11.8, SD = 0.9) and NC (mean = 11.8, SD = 0.9, $p = 0.022$). Moreover, Pearson correlations analysis between DD-CGAS and depressive symptoms revealed that an higher level of depressive symptoms increased the risk of a poorer global functioning.

Conclusions: Depressive symptoms are more common in subjects suffering from AS/HFA than in healthy controls. These results suggest that the depressive comorbid symptoms in AS/HFA patients may be associated with a poorer global functioning, with a consequent impairment in their psychological profile and social adjustment. These data should alert clinicians to the importance of assessing mood disorders and highlight the need for an early diagnosis and treatment.

P04-30

Evaluation of the developmental profile in patients with autism spectrum disorders

Riccio, Maria Pia¹; Borriello, Giuseppina²; Maresca, Roberta²; Russo, Lucia¹; Ferrentino, Roberta²; Bravaccio, Carmela³

¹Second university of Study of Naples, Neuropsychiatry, Italy;

²University, Pediatrics, Italy; ³University "Federico II" of Naples, Pediatrics, Italy

Introduction: Autism is an early onset neuro-biological disorder characterized by impairment of social interaction and communication's area and restricted and stereotyped interests. 70% of cases is associated to a mental delay condition

Aim: To evaluate developmental profile in a population of patients with 1st diagnosis of autism to detect competence and weakness areas; to identify early association with cognitive disability conditions.

Patients and methods: 11 patients (3F; 8M) of average age of 38 months, with diagnosis of Autism Spectrum Disorder (6/11 cases), DPS (3/11 cases), DPS NAS (2/11 cases). At the moment of diagnostic evaluation, Griffiths Mental Development Scales were administered. We have then progressed to the analysis of patients' developmental profiles.

Results: The average scores of the single scales underlines as unique competence area in all children the Locomotory scale with average raw score of 48.39—90° for average age. Other explored areas, except Personal-Social area (raw score 31.68), located at 5th pc for average age, show a severe delay in some competences, with average raw scores values equivalent to 22.78 for the Language Scale, 25.69 for the Eye-hand Coordination Scale, 29.7 for the Performance Scale, 3.63 for the Practical Reasoning Scale, all values lower than 1st pc for average age. Only 4 (2 with DPS NAS diagnosis and 2 with DPS one) of patients showed a mental age equivalent to the chronologic one. The same 4 patient have, therefore, showed a Developmental Quotient appropriate for age, while the other children obtained a Developmental Quotient lower than 60, with a total mean of 72.45 and a median of 57.7.

Conclusions: developmental profiles analysis of patients with Autism Spectrum Disorders seems an helpful instrument in order to identify early cognitive disorders and to draw up appropriate and targeted rehabilitation programs. Test repeatability allows, furthermore, to monitor clinical evolution over time.

P04-31

Autistic spectrum disorders in individuals with severe hearing impairment

Sevketoglu, Timur; Kilincaslan, Ayse; Motavalli Mukaddes, Nahit

Istanbul University, Faculty of Medicine, Child and Adolescent Psychiatry, Turkey

Background: Hearing impairment (HI) is reported to occur 13–46% among individuals with autistic spectrum disorders (ASD) (1). As far as we know, there is only one study concerning the rate of autism in a clinical sample of individuals with HI, which found a rate of 5.2% (2).

Aims: To assess systematically the prevalence and associated risk factors of ASD in children and adolescents with severe HI attending a special school for hearing impaired.

Method: 272 students (age range: 5–17 years) with bilateral severe to profound sensorineural HI (≥ 90 db) are examined for ASD using a two-stage process. The first stage aimed to determine the probable cases via direct observation, scoring the Autism Behavior Checklist and examining medical reports. In the second stage the *probable cases* were asked to undergo psychiatric examination and their autistic symptoms are scored with Childhood Autism Rating Scale. They were judged whether they required the final diagnosis of autistic disorder (AD) or other ASD according to DSM-IV criteria.

Results: 14 of the (5.1%) got the final diagnosis of AD. The HI + AD group was significantly different from the non-autistic group in terms of presence of additional medical disorders ($p = 0.026$), birth weight ($p = 0.025$), intellectual level ($p = 0.005$) and heredity of deafness ($p = 0.011$).

Conclusion: Being conducted in a community sample, this study confirms that AD is more common among individuals with HI than the general population. Presence of ASD appears to be more closely associated with conditions indicating greater brain damage (eg. mental retardation, visual impairment, epilepsy, CP) than factors related to HI (eg. age of diagnosis, etiology, use of hearing aid).

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P04-32

Autism spectrum disorders and schizophrenia: an activation likelihood estimation meta-analysis of emotional face processing

Sugranyes, Gisela¹; Kyriakopoulos, Marinos²; Corrigall, Richard³; Taylor, Eric¹; Frangou, Sophia²

¹Institute of Psychiatry, Kings College London, Department of Child and Adolescent Psychiatry, UK; ²Institute of Psychiatry, Kings College London, Section of Neurobiology of Psychosis, UK; ³South London and Maudsley NHS Trust, Child and Adolescent Mental Health Services, Snowfields Adolescent Unit, UK

Background: Impairment in social cognition, in which facial emotion recognition (FER) plays a key role, is a cardinal feature of the clinical presentation of both autism spectrum disorders (ASD) and schizophrenia (SZ).

Aim: Neuroimaging studies have consistently shown functional abnormalities in ASD and SZ during FER. We aim to examine differences and similarities in the neural correlates of FER between the two disorders, using a meta-analytic approach.

Methods: We conducted a systematic literature review of functional magnetic resonance imaging studies comparing ASD and SZ patients to healthy controls (HC) using FER paradigms focusing on negatively valenced affect. Relevant spatial coordinates from the original studies were subjected to quantitative activation likelihood estimation meta-analyses. Statistical inferences were based on a threshold of $p < 0.05$ with False Discovery Rate correction and minimum cluster size of 50 mm³.

Results: Nineteen studies met inclusion criteria giving 55 ASD and 222 SZ patients and 273 HC. Significant clusters of activation were located in the superior temporal and middle frontal gyrus for the AC > HC contrast, and the postcentral gyrus in the HC > ASD contrast. The HC > SZ contrast revealed significant areas of activation in the cerebellum, middle occipital and fusiform gyrus, globus pallidus, amygdala and thalamus, whereas SZ > HC exhibited clusters of activation in the cuneus, precentral and parahippocampal gyrus.

Conclusions: Despite phenomenological overlap, the patterns of neural correlates of facial emotion processing may differ between ASD and SZ. Our findings suggest that ASD patients exhibit enhanced neural responses in structures typically implicated in facial feature extraction and reduced activation in somatosensory cortices involved in invoking (“mirroring”) internal representations of emotions. Conversely, SZ patients appear to express relative underactivation throughout the facial affect processing network.

P04-33

Clinical characteristics of the patients at the outpatient clinic for adult PDD in Japan

Tani, Masayuki¹; Yukawa, Yoshinori¹; Yokoi, Hideki²; Igarashi, Miki²; Ide, Takaki²; Kanai, Chieko¹; Ota, Haruhisa¹; Yamada, Takashi¹; Watanabe, Hiromi¹; Iwanami, Akira¹; Yamasue, Hidenori³; Nobumasa, Kato¹

¹Showa University School of Medicine, Psychiatry, Japan; ²Showa University Karasuyama Hospital, Psychiatry, Japan; ³Faculty of Medicine University of Tokyo, Psychiatry, Japan

Autism and Asperger disorder are subtypes of pervasive developmental disorders (PDD). The DSM-IV criteria for autism and Asperger disorder both require patients to demonstrate the same number of impairments in social interaction and to demonstrate obsessions or repetitive behavior. However, for Asperger disorder, there must be no significant general delay in language or in cognitive development. Recent studies that have examined PDD reported consistently estimates in the 60–70/10,000 range, which meant that PDD was one of the most frequent childhood neurodevelopmental disorders. In Japan, at present, the medical and educational services for persons with PDD are lacking. For the treatment and research of PDD, a new outpatient clinic for adult PDD opened in 2008 at Showa University Karasuyama Hospital. In the present study, we report the clinical characteristics of the 715 patients at the clinic for adult PDD of Showa University Karasuyama Hospital at the period of between July of 2008 and July of 2010. According to the criteria of DSM-IV, 52 patients (47 males and 5 females) were diagnosed as autistic disorder (mean age; 26.7 years), and 110 (76 males and 35 females) were Asperger disorder (mean age; 28.8 years), and 140 (93 males and 47 females) were pervasive developmental disorder not otherwise specified (mean age; 29.3 years). To investigate subjective symptoms, the Autism-Spectrum Quotient (AQ), developed by Baron-Cohen et al. was administered. AQ is an instrument for screening adult non-mentally retarded patients for PDD. Mean total score of AQ was higher in autistic disorder, Asperger disorder, and in PDDNOS, compared to that in other mental disorders. The mean IQ was highest in AS, and VIQ was significantly higher than PIQ in autistic disorder, Asperger disorder, and in PDDNOS.

P04-34

Delayed face recognition in children with autism spectrum disorders

Tehrani-Doost, Mehdi¹; Salmanian, Maryam²; Ghanbari Motlagh, Maria³

¹Tehran University of Medical Sciences, Child and Adolescent Psychiatry, Islamic Republic of Iran; ²Institute for cognitive Science Studies, Islamic Republic of Iran; ³Tehran University of Medical Sciences, Islamic Republic of Iran

Background: Children with autism spectrum disorders have great problems in social interactions. While many studies report disability in face memory in individuals with ASDs, others indicate that this kind of memory is intact in this group. In the present study, delayed face recognition has been investigated in children with ASD comparing to age and sex matched normal group.

Methods: Benton Facial Recognition Test was administered on 15 children with ASDs (high functioning autism and Asperger syndrome) and 15 normal participants, aged between 8 and 17, in both delayed and non delayed stages. In the first stage, the long form of Benton Facial Recognition Test was performed without any delay. In the second stage, after a week, the long form of Benton Facial Recognition Test was performed with delay: each target face was showed 5 s, and then after 15 s delay, the stimulus faces were showed. First and completed times and correct responses were measured in both stages. In addition, The Raven's Progressive Matrices test was also administered to the participants.

Results: Findings of Benton Facial Recognition Test in both delayed and non delayed stages showed no significant difference in children with ASDs compared to normal group. In this study, a high correlation was observed between scores of delayed and non delayed stages of Benton Facial Recognition Test in children with ASD. Therefore, there was not a significant difference between simultaneous and delayed presentation of the test in children with ASD. In addition, there was no significant difference between scores of Benton Facial Recognition Test and IQ. Thus, face memory is less correlated to general cognitive abilities in children with ASDs.

Conclusion: in this study, no significant difference was observed in delayed face recognition between children with autism spectrum disorders and normal group.

Keywords: Benton Facial Recognition Test, Autism Spectrum Disorders (ASDs), delayed face recognition.

P04-35

Smoking during pregnancy and risk of autism spectrum disorder in a Finnish National Birth Cohort

Tran, Phuong Lien¹; Lehti, Venla¹; Lampi, Katja¹; Helenius, Hans²; Brown, Alan³; Sourander, Andre¹

¹University of Turku, Department of Child Psychiatry, Finland;

²University of Turku, Department of Biostatistics, Finland;

³Columbia University, Department of Psychiatry, USA

Background: Maternal smoking during pregnancy is known to be associated with various adverse outcomes in the offspring, but the studies on the risk of autism spectrum disorders (ASD) have shown mixed results.

Objectives: To investigate the association between maternal smoking during pregnancy and subtypes of autism spectrum disorders (ASD).

Methods: We conducted a population-based case-control study from all live births in Finland between 1987 and 2005. Information on maternal smoking was collected from the Finnish Medical Birth Register (FMBR). Information on ASD in offspring was obtained from the Finnish Hospital Discharge Register (FHDR). Of all ASD cases (4,864), 94% belonged to the following three diagnostic subtypes: childhood autism (1,132), Asperger's syndrome (1,186) and other pervasive developmental disorder/pervasive developmental disorder, unspecified (PDD) (1,196). Each case was matched to four controls on date of birth, gender and place of birth, selected from the FMBR. Conditional logistic regression was used for the analyses.

Results: When different subtypes of ASD were studied, maternal smoking continuing after the first trimester was associated with pervasive developmental disorder (PDD) (OR = 1.3 [95% CI: 1.1–1.5]; $P < .01$). The risk was observed after controlling for maternal age at birth, mother's socioeconomic (SES) and psychiatric status and infant's weight for gestational age (WGA). However, smoking limited to only first trimester was not associated with PDD or any of the three studied subtypes.

Conclusion: Our results suggest that PDD is related to maternal smoking, whereas childhood autism and Asperger's syndrome are not. The findings may shed light on the aetiology of PDD. Further studies on maternal smoking and its association with other environmental as well as genetic factors are needed.

P04-36

The prevalence of schizophreniform psychotic episodes in Asperger syndrome seems to depend on the age of the group of patients

Wolf, Jonathan; Stoesser, Dieter; Guenter, Michael

University of Tuebingen, Child and Adolescent Psychiatry, Germany

Background: The question as to how frequently comorbid schizophreniform psychotic episodes occur in Asperger syndrome (AS) is a matter of controversy. Since the year 2000 a number of new figures were presented to this topic. In them the prevalence ranges between 0 and 15%.

Aims: The aim was to determine the prevalence of psychotic episodes in AS. We compared figures from our own group of patients with figures of former studies. To analyze the broad range of the figures we tested the hypothesis whether the prevalence found is depending on the average age of the group of patients or not.

Materials and methods: We carried out a retrospective evaluation of the files on 157 patients with AS (average age 13.8 years). We compared our own figures to figures of former studies. We included all studies published since 2000, which included at least a number of 40 subjects. Results In our own group of 157 patients we found 6.4% with schizophreniform psychotic episodes. We found 4 studies published since the year 2000 which described samples between 49 and 70 subjects. The average age of our sample was 13.8 years. The average age of the samples of the former studies was between 12.7 and 32.2 years. Reviewing the data there seems to be a positive linkage between age and prevalence (statistical trend, .087).

Conclusions: The range of figures of the prevalence of psychotic episodes in AS is very wide. From a childpsychiatric point of view it is evident that the prevalence is depending on the age. In an adolescent population we assume a prevalence of about 7%. The live time prevalence seems to be between 12 and 15%. It is important that the current state of knowledge will be supported by further research in this field.

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P04-37

Blonanserin in the treatment of autistic disorder in child and adolescents

Akama, Fumiaki; Yamada, Keigo; Kato, Koji; Saito, Mai; Matsumoto, Hideo

Tokai University School of Medicine, Japan

Aims: Patients with autistic disorder (AD) demonstrate irritability, aggression, deliberate self-injury and tantrums, and sociability,

communication, maladjustments to family or school may worsen due to these symptoms. Risperidone and aripiprazole has been approved by the US Food and Drug Administration for the treatment of irritability in children and adolescents with AD. Also, the efficacy of another second-generation antipsychotics (SGA), such as quetiapine and olanzapine for irritability with AD has been reported previously in open-label trial. However there is no study to evaluate the effectiveness and safety of SGA for the treatment irritability with AD in Japan. The aim of this study was to provide preliminary data on the usefulness and safety of blonanserin (BNS) for patients with AD.

Methods: In this review of patient care statistics, it was noted that 16 consecutive patients with AD had been treated with antipsychotics from May 2010 to July 2010. It was 6 patients treated with BNS among 16 patients. We excluded one patient using benzodiazepine and intended for 5 patients. The Aberrant Behavior Checklist-community irritability subscale (ABC-I) scores was used to evaluate the efficacy of BNS.

Result: The ABC-I scores were significantly reduced from 12.9–17.2 pre-treatment to 7.2–9.7 post-treatment ($P = 0.019$). All patients showed a reduction of the ABC-I score. The rate of patients with side effects was 20.0%, but serious side effects did not develop.

Conclusion: BNS may be effective and safe in the treatment of irritability with AD in child and adolescents. This trial is a preliminary pilot study, and further controlled studies will be needed to confirm our findings.

P04-38

The effect of rehabilitation services for communication skills training program to adults with high-functioning autism spectrum disorders (ASD)

Sano, Yumiko; Yokoi, Hideki; Igarashi, Miki; Obata, Hiromi; Fukushima, Mayu; Kato, Nobumasa

Showa University Karasuyama Hospital, Japan

Objectives of study In Japan many adults with ASD pass through the public health checking system at 1.5 and 3 years of life as well as their school life, and confront the difficulties in social relationship and communications when they join the community. Since the importance of urgent establish of supporting systems to adult ASD has been recognized, we have opened out-patient clinic and rehabilitation facility for adult with high-functioning ASD in Karasuyama Hospital, one of the affiliated hospitals of Showa University. We have been providing communication and social skills training programs at rehabilitation facility to adults with high-functioning ASD. The purpose of this study was to evaluate the effect of the providing program to an adult ASD.

Subjects and methods: Subjects were 17 adults who were diagnosed high-functioning ASD. Subjects who participated in the program were administered psychometric measure (IRI: Interpersonal Reactivity Index, Japanese version) on the pre and post program session. The differences were analysed by Wilcoxon's signed-rank test (two-sided) and we considered $P < 0.05$ as significant.

Results: Perspective-Taking (tendency to spontaneously adopt the point of view of others) which is cognitive aspect of empathy, was significantly increased. Other subcategories of IRI showed no significant change.

Conclusions: This study revealed that communication and social skills training program for adult ASD was effective for their cognitive aspect of empathy, Perspective-Taking. Supporting adult ASD is essential as well as effective, on top of early interventions to ASD in youth.

P04-39

Association of SLC6A2 and behavioral phenotypes of autism spectrum disorder

Yoo, Hee Jeong¹; Cho, Soo Churl²; Kim, Soon Ae³; Park, Mira³; Chung, Un Sun⁴; Park, Tae Won⁵; Sohn, Jung Woo⁶; Shin, Min Sup²; Kim, Boong Nyun²; Kim, Jae Won²

¹Seoul National University Bundang Hospital, Republic of Korea;

²Seoul National University Hospital, Republic of Korea; ³Eulji

University, Republic of Korea; ⁴Gyeongbook National University,

Republic of Korea; ⁵Cheonbook University, Republic of Korea;

⁶Chungbook University, Republic of Korea

Objectives: The objective of this study is evaluating relations between candidate genes derived from GWAS and traits and behavioral and cognitive phenotypes of autism spectrum disorder (ASD). Our hypothesis is there might be relations between SLC6A2 gene which is related to norepinephrine transporter and attention in ASD.

Methods: We performed GWAS for 143 patients with ASD (79.9 ± 35.6 months, 22 females) in Korean population and 828 healthy, sex-matched adult controls with same ethnicity. All subjects were genotyped using the Affymetrix 5.0 SNP array and we applied stringent quality control criteria, including call rates, minor allele frequencies, heterozygosity, relationship errors, Mendelian inheritance error, and Hardy-Weinberg Equilibrium, and cluster quality control. We performed the second-phase family-based candidate gene analysis using TDT and quantitative trait analysis using QFAM test for significant alleles and behavioral domains of ADOS, ADI-R, rating scales measuring behaviors of ASD and executive functions tests.

Results: After correction of multiple testing with false discovery rate, 5 SNPs in 4 genes (2 SNPs of FHIT gene, 1 SNP of STX8, COL23A1, and SLA6A2 each) revealed significant association ($p \leq 3.47 \times 10^{-6}$, adjusted $p < .05$). The second-phase analysis for 243 family trios (729 individuals) revealed that 2 SNPs of FHIT gene (rs812965, rs780375, $p < .05$) and one SNP of SLC6A2 (rs41153, $p = 0.00$) revealed significant association. In quantitative trait analysis, rs41152 and rs2270935 in SLC6A2 gene revealed significant association with Sensori-motor Domain of Asperger Syndrome Diagnostic Scale and *Quantitative Abnormalities in Communication and Lack of Socioemotional Reciprocity* of ADI-R ($p < .05$). There are no significant association with cognitive function tests and SLC6A2 gene.

Conclusion: These results from two-phase genetic association study suggest that SLC6A2 might be involved in pathogenesis of ASD, especially in specific behavioral domains.

P04-40

Can digital nannying cause autistic disorders?

Pouretamad, Hamid Reza

Shaeid Beheshti University, Psychology, Islamic Republic of Iran

Digital Nannying (DN) refers to a type of child nursing in which the child is prolongedly exposed to TV, CDs or computerized products usually associated with simple and reparative patterns of child nursing. The current study had three aims: (1) to identify general environmental characteristics of DN. (2) To introduce behavioural characteristics of children who experienced DN. (3) To test the efficacy of Affectual Compensatory Intervention (ACI).

Eleven boys (aged between 15–29 months) with autism (DSM-IV-TR), who had experienced DN were identified among children admitted to the Center for the Treatment of Autistic Disorders, Tehran. All children, except one, were from well educated middle to high social class families. Their parents were asked to apply the ACI at home. Although the importance of the intervention was highlighted to parents, only 50% of them were able to imply the intervention. A wide range of improvements was occurred following the intervention, so that, the initial diagnose of autism was questioned in 2 cases. The results are discussed under the light of other studies.

P04-41 **Gender differences in a sample of Egyptian children with Autism spectrum disorder**

Shahin, Ola

Cairo University, Psychiatry, Egypt

Ola Shahin, Sanaa Kamal, Irma Moilanen, Yasmine Ashour Male predominance has consistently emerged in all autism spectrum disorder (ASD) research to date in epidemiological as well as clinical populations with estimates ranging from male to female sex ratio of 2.5–4:1. Despite this long recognized gender disparity in ASD, there is a paucity of research addressing gender as it relates to core ASD symptom presentation. This study was done in OP clinic for PDD, Cairo university, Egypt. The aim of the study is to find gender differences in the clinical presentation especially; risk factors, severity and core symptoms of ASDs including the social, communication and restricted and stereotyped behaviors. The study is a comparative cross sectional study done on 44 patients with ASD and was divided into male (N = 31) and female group (N = 13). Clinical assessment using Vineland social scale (VSMS), Childhood Autism Rating Scale (CARS), Autism Diagnostic Interview-Revised (ADIR) and Social Responsiveness Scale (SRS). The results revealed that boys showed significantly higher intelligence and higher social quotients than girls as measured by (VSMS). According to ADI-R, girls had better receptive language than boys; girls were significantly more sensitive to noise and they scored higher in unusual sensory interests. On the other hand, boys were slightly more severe than the girls in unusual preoccupations, repetitive use of objects or interest in parts of objects, compulsions and rituals, resistance to trivial changes in the environment and in other complex mannerisms or stereotyped body movements. No statistically significant differences between the boys and girls regarding the social development and play but, boys scored better than girls in having friendships. Key words (autism spectrum disorder-pervasive developmental disorders-gender differences-core ASD symptoms-autism diagnostic interview-revised)

P04-42 **Asperger Syndrome and computer abuse**

Barth, Gottfried Maria¹; Oezen, Meral²

¹University of Tübingen, Child and Adolescent Psychiatry, Germany;
²University of Tübingen, Germany

Asperger Syndrome and computer abuse both show increasing incidence in the past few years and frequently appear combined. In a sample of adolescents with computer abuse more than 20% showed prominent symptoms of Asperger Syndrome.

Several Questions arise:

Are symptoms of Asperger Syndrome consequences of computer abuse or arises a higher risk for computer abuse from Asperger Syndrome?

What are the benefits of computer use for Adolescents with Asperger Syndrome and what risks arise therefrom?

What are the psychologic differences between adolescents showing Asperger symptoms with and without computer abuse.

Which therapeutic consequences are reasonable for computer abuse in adolescents suffering from Asperger Syndrome?

Answers will be gathered from our sample of more than 100 adolescents suffering from computer abuse and/or Asperger Syndrome.

P04-43 **Schizotypal traits in parents of children with autism**

Gaddour, Naoufel¹; Chokri, Amine¹; Boussaid, Narjes²; Mechri, Anwar²; Missaoui, Sonia²; Gaha, Lotfi²

¹University of Monastir, Psychiatry, Tunisia; ²University of Monastir, Tunisia

Introduction: Links between autism and schizophrenia are suspected and may be explained by a common spectrum on clinical, genetic and neurobiological levels. Some studies reported higher exposition to schizophrenia and schizotypal personality disorder in relatives of children with autism. Our aim was to assess schizotypal personality traits in parents of children with autism.

Methods: This cross sectional study was conducted at the outpatient clinic of psychiatry of University Hospital F. Bourguiba in Monastir Tunisia. Parents of 100 children with autism spectrum disorders, diagnosed by board certified child psychiatrists using DSM IV criteria and Childhood Autism Rating Scale, filled the SPQ (Schizotypal Personality Questionnaire). Results were compared to a control group of 100 parents of children followed at the clinic of paediatrics for non developmental disorders (e.g. diabetes mellitus, tuberculosis, etc.).

Results: Mean SPQ total score was 24.6 in parents of children with autism and 27, 2 in control group, showing no significant difference. However, parents of children with autism showed a clear tendency to have less positive symptoms than controls.

Conclusion: These results do not support the existence of a higher prevalence of global schizotypal traits in parents of children with autism, but show some particularities in the distribution of schizotypal symptoms.

P04-44 **Early diagnosis and treatment of autistic spectrum disorder the R. of Macedonia**

Raleva, Marija¹; Boskovska, Meri²

¹University Clinic of Psychiatry, Department of child and adolescent psychiatry, Makedonia; ²Institute of mental Health of Children and Adolescents, Makedonia

Aims: To define the prevalence of autistic spectrum disorder in the R. of Macedonia on the basis of early diagnostic procedures, using the diagnostic instruments such as DAWBA, ADI-R, CARS and Vineland.

Methods: Since autistic spectrum disorder is often difficult to be marked off out of the variety of developmental disorders that start in early childhood such as delay in speech and psychomotor development, behavioural problems, it is necessary to establish early working diagnosis. We use the ICD10 and DSM IV diagnostic criteria for autistic spectrum/pervasive disorders, observation and applying diagnostic instruments such as (Autistic Disorder Interview-Revised version; Bayley's Scale for Child Development; Childhood Autism Rating Scale; DAWBA and Vineland) (1). The diagnosis is established by a multidisciplinary team consisting of child psychiatrist, psychologist, speech therapist and special educator.

Results: During the period of 3 years there are 87 children being diagnosed and followed up. The age range is from 2, 5 to 7 years. The ratio between boys and girls is 4:1. Out of 87 children there was 6 children diagnosed as Asperger's syndrome, 3 as Rett's syndrome, 8 disintegrative psychosis, and 7 with atypical autism. All children were included in the early rehabilitation program, designed individually.

Conclusions: The incidence of the autistic spectrum disorder in children is increasing during the analysed period (2) due to better understanding, diagnosing and treatment of the autistic children, which is very complex and improving during time.

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P05-01

Sociocultural consequences of child sexual abuse, A study of Multidisciplinary Child Abuse Team in Turkey

Celik, Gonca¹; Tahiroglu, Aysegül²; Arykan, Özge²; Avci, Ayşe²; Cekin, Necmi²; Evliyaoglu, Nurdan²

¹University of Cukurova, Child Adolescent Psychiatry, Turkey;

²University, Turkey

Sexual abuse may affect the victims by psychiatric, sociocultural and emotional areas currently or in any life period. Different cultural groups likely have varying norms regarding many issues, such as the role of the family, styles of coping with adverse life events, the cultural meaning of specific symptoms. In this study, findings of child sexual abuse cases who evaluated by Cukurova University Multidisciplinary Child Abuse Team will be presented and discussed as cultural dimension.

Method: The Cukurova University Multidisciplinary Child Abuse Team studied with sexual abuse cases by director of child and adolescent psychiatry department since 2007. The cases are evaluated in the room include one-way mirror and managed by team members of each department. The study included 489 cases who referred as victims of sexual abuse with judicial consultation to take medical advice for mental health assessment, through 4 years.

Results: Results showed that girls were more prevalent than boys (341 girls and 143 boys; 70 versus 30%) in total sample. The revictimization (187 girls 37%; boys 55, 26%, $p < 0,001$) and non supportive-repressive family approach were more common among girls than boys 27,9% girls versus 15,1% boys; $p < 0,0001$). Groups who drop out of school and non supportive family approach were more likely to have psychiatric diagnosis in during the follow up after sixth month. ($p < 0, 000$; $p < 0,008$).

Conclusions: Clinicians working in sexual abuse cases have many difficulties because of cultural context of our country. Legal process may contribute to protection and treatment of victims. Clinicians should evaluate the patient and patient's family and their sociocultural background in treatment strategies.

Keywords: Sexual abuse, sociocultural context, revictimization.

P05-02

Childhood sexual abuse as a risk factor of posttraumatic stress disorder in adult life of women experiencing intimate partner violence

Dabkowska, Malgorzata Maria

University of Torun, Collegium Medicum, Department of Psychiatry, Poland

Patients with psychiatric disorders were alarmingly exposed to physical violence or sexual abuse in their childhood. Previous research has demonstrated a strong association between IPV victimization and mental health symptoms. Women much more often than men experience physical violence from their partners and not infrequently are victims of systematic, long-term persecution. This study aimed to evaluate: I. incidence of post-traumatic stress disorder (PTSD) as a condition in women who had experienced violence from life partner II, which risk factors predisposed to severe intensity of PTSD symptoms.

Methods: I. The women's level of posttraumatic stress was assessed using part 3 of the Posttraumatic Diagnostic Scale 17-item questionnaire that distinguishes three categories of symptoms associated with PTSD: re-experience, avoidance, and hyperarousal. Study group consisted of 47 women aged between 19 and 68 years who were victims of violence from a life partner.

Results and conclusions: 80% of women who are victims of interpersonal violence had moderate to severe or severe (47%) increase of occurrence of PTSD symptoms. Above 50% of victims were reported negative effects of symptoms on all directions of daily functioning. Victims of interpersonal violence are inherently at risk of PTSD. Severity of PTSD symptoms correlates with level of impairment in functioning. More severity symptoms of PTSD were observed in this part of intimate partner violence victims who had the co-occurrence of childhood sexual abuse, adult sexual assault during violence and worse results at school in the past. The result of this work describes the role of early stressful life events such as sexual abuse on the appearance and intensity of PTSD symptoms.

P05-03

Dissociation themes in play narratives of children assessed in a forensic child psychiatric unit

Luoma, Ilona¹; Latva, Reija¹; Sorvali, Tarja²; Salmelin, Raili³; Kaukonen, Päivi⁴

¹Tampere University Hospital and University of Tampere, Department of Child Psychiatry, Finland; ²Kanta-Häme Central Hospital and University of Tampere, Department of Child Psychiatry, Finland; ³University of Tampere, School of Health Sciences, Finland; ⁴Tampere University Hospital, Department of Child Psychiatry, Finland

Background: Maltreated children often show dissociation themes in their play. These may occur as a response to traumatic experiences.

Aims: To explore the occurrence and determinants of dissociation themes in play narratives of children assessed in a forensic child psychiatric unit because of alleged physical or sexual abuse.

Materials and methods: The MacArthur Story Stem Battery (MSSB) was administered for 34 children who were assessed in the Child Forensic Psychiatric Unit in Tampere University Hospital, Finland. The videoed narratives were coded according to Tampere Clinical Coding Manual (Latva et al., 2009). The dissociation themes *spacing out* (e.g. fantasy proneness, spacing out, absorption/boundary confusion) and *traumatic dissociation* (e.g. intrusions of traumatic material, bizarre shifts in story lines, identifying with the aggressor) were coded and their associations with children's background factors (gender, family constellation), diagnostic status (the presence of any ICD-10 F diagnosis) and emotional/behavioural symptom levels according to the Child Behavior Checklist (CBCL) were explored.

Results: Children living in foster care more often showed spacing out in their play narratives than children living with their biological family. The presence of any psychiatric diagnosis was associated with traumatic dissociation themes. Gender and high symptom levels of the children were not associated with dissociation themes.

Conclusions: Abuse and/or inadequate parental care often precede the placement of children in foster care, and spacing out themes in children's play narratives may reflect these experiences. Traumatic dissociation themes in children's play are probably detected by clinicians because children showing these features more often have psychiatric diagnosis. Parents may fail to detect or report the signs of trauma in their children. Play narratives are a way to hear a child's own voice during the diagnostic process and treatment planning.

P05-04

Attachment problems among internationally adopted toddlers in Finland; the FINADO-study

Raaska, Hanna¹; Sinkkonen, Jari²; Lapinleimu, Helena³; Mäkipää, Sanna⁴; Elovainio, Marko⁵

¹Helsinki University Central Hospital, Turku University, Child psychiatry, Finland; ²Save the Children Finland; Turku University, Finland; ³Turku University Central Hospital; Turku University, Finland; ⁴Capasitas Familia, Finland; ⁵National Institute for Health and Welfare; Helsinki University, Finland

Objectives: To evaluate the attachment problems and their changes in time in adoptees compared to norm sample.

Background: International adoptees may have higher risk of attachment problems due to their more frequent history of maltreatment. The extent of possible recovery in attachment is poorly known.

Methods: The change in attachment was measured using the 20-item Kinship Center Attachment Questionnaire (KCAQ, Kappenberg and Halpern, 2006) with a 7-point scale from 0 = never/rarely to 6 = almost always. The total score was divided into 4 factors: 1 = positive adjustment/development, 2 = negative behavior, 3 = emotional reactivity, 4 = distancing from caregiver support. The parents of internationally adopted children (N = 171, boys 40%) filled in the KCAQ-questionnaire at the child's mean age of 2,8 (SD 0.6) and 4,7 (SD 0.6) years, respectively. The mean time in adoptive families was 1,9 and 3,8 years in the surveys conducted in 2007 to 2010, resp. The normative sample (N = 244, mean age 3.1, SD 1.3,

boys 46%) was collected through the well-baby clinics. In comparisons with the norm population the mean scores were adjusted with age and sex.

Results: Figure 1. Comparisons of the adoptees' KCAQ mean scores between time 1 and 2. Figure 2. Comparisons of the adjusted mean total scores between adoptees and norm population in time 1 and 2. Figure 3. Comparisons of the adjusted mean KCAQ scores between adoptees and norm population in time 1 and 2. Factors 1 and 2. Figure 4. Comparisons of the adjusted mean KCAQ scores between adoptees and norm population in time 1 and 2. Factors 3 and 4. ns. = non significant, *p < 0.05, **p > 0.001, ***p < 0.0001.

Conclusions: Finnish adoptees presented recovery in attachment in 2 years time. Compared to normative children they had more attachment problems still 2 and 4 years after adoption. Most of the problems were in the field of emotional reactivity.

P05-05

Childhood history of abuse among Iranian adults

Akhgari, Zahra; Rostami, Reza; Zarei, Jamileh

University of Tehran, Islamic Republic of Iran

Introduction: Child abuse is known as an important social and hygienic problem around the world. Behavioral and psychological problems in adolescence and adulthood are the long term psychological effects of physical abuse. But there is not an adequate information about child abuse history in Iranian adults. So the research is needed to understand the origins and effects of this phenomenon.

Method: 500 individuals (275 females, 225 males) who were between 18 and 60 years old (mean = 33/2, SD = 3/4) were selected purposely, and Childhood History Questionnaire (CHQ; Milner, Robertson, and Rogers, 1990) was performed on them.

Results: Findings showed that the physical abuse was the most prevalent among the subjects. In addition, there was a relatively high history of sexual abuse in female subjects.

Conclusion: The educational programs regarding to child bearing are an important need for prevention of child abuse in Iranian families.

Keywords: Child abuse; CHQ; Iranian adults.

P05-06

Parental physical punishment, verbal aggression and psychological violence towards children and adolescents in a Brazilian poor urban community

Bordin, Isabel A.¹; Paula, Cristiane S.²

¹Universidade Federal de São Paulo, Department of Psychiatry, Brazil; ²Universidade Presbiteriana Mackenzie, Brazil

Objective: To verify the prevalence of parental physical punishment (PP), verbal aggression and psychological violence in four groups of children: (1) younger girls (0–10 years), (2) younger boys, (3) older girls (11–17 years), and (4) older boys.

Methods: This cross-sectional study is the Brazilian component of the World Studies of Abuse in the Family Environment (WorldSAFE). In a poor urban community near São Paulo City, we selected a probabilistic sample of clusters that included all eligible households (women aged 15–49 years with a son/

daughter < 18 years). One mother–child pair was randomly selected per household (n = 813; response rate: 82.4%). Parental child-rearing behaviors (past 12 months) were investigated using a WorldSAFE copyrighted checklist. Severe PP included shake (if age 0–2 years), hit with an object, kick, choke, smother, burn/scald/brand, beat or threat with a weapon. Non-severe PP included spank buttocks with hand, pinch, twist ear, pull hair, hit head with knuckles, slap face/back head or force to kneel/stand in one spot with an added burden. Verbal aggression involved shout/yell/scream, call names, curse or refuse to speak. Psychological violence included threats (to leave/abandon, to invoke ghosts/evil spirits/harmful people, to kick the child out of the house) or lock him/her out of house.

Results: Severe PP was more prevalent among younger boys (26.5%) and older boys (21.0%). Non-severe PP was more prevalent among younger girls (77.0%) and younger boys (76.3%). Verbal aggression was more prevalent among younger boys (83.3%). Psychological violence similarly affected the four groups of children (22–28%). Any type of aggression affected at least 79.0% of children in each group, especially younger boys (91.6%).

Conclusion: High numbers of boys and girls, children and adolescents, suffer some form of parental aggression in the studied community, especially younger boys. Parental aggression towards children varies according to child age and gender.

P05-08

Tobacco, a link to child abuse

Olatinwo, Joshua

Voices of Hope Initiative, Health And Environment, Nigeria

Every day in Nigeria, more than **1,000** young people become regular smokers. That's more than **one million** new smokers a year. The pull to smoke is not just affecting someone Else's kid. Our children sees the glamorous advertising, has peers who smoke and is as vulnerable to becoming a smoker as much as anybody Else's teen. Nearly all first time smoking happens before high school graduation and Our children need to hear that smoking is bad for him/her. In Nigeria, most of the cancer cases reported lately are caused by tobacco. If our children smokes, he/she cannot quit just because we ask them to. No. Teens do not realize they are addicted until it is too late. Among adolescents aged 10–18, about three-fourths of daily cigarette smokers report that they continue to use tobacco because it is really hard for them to quit. Our children needs to team up with us and a doctor in order to kick this nasty habit. Parents may be investigated as child abusers if they smoke in the presence of their children, especially if they have asthma, allergies, or other conditions making them especially sensitive to secondhand tobacco smoke. However, in many cases where a parent continues smoking in the presence of a child, and there is no to tell how bad it is, a simple blood, urine, or saliva test for the breakdown product of nicotine would provide conclusive proof that the child has being exposed to high levels of tobacco smoke. However, since children with asthma and other medical conditions can experience life-threatening respiratory failure from exposure to this, it can in some cases be as serious as the more traditional forms of child abuse. Active work on our teens self-esteem, self-confidence and resilience can prevent them from smoking. Often, teens cite 'being accepted' as a reason for starting to smoke, along with modeling someone they admire, to loose weight or to overcome stress. It is worth our time and money to help our children get through this issue.

P05-09

Association between physical, emotional and sexual abuse and household dysfunction in Macedonian students: results from the ACE survey

Raleva, Marija¹; Hadzihamza, Kadri²; Filov, Izabela³; Jordanova-Pesevska, Dimitrinka⁴; Isjanovska, Rozalinda⁵

¹University Clinic of Psychiatry, Department of child and adolescent psychiatry, Makedonia; ²University Clinic of Psychiatry, Makedonia; ³Psychiatric Hospital "Demir Hisar", Adolescent Department, Makedonia; ⁴WHO country office-Skopje, Makedonia; ⁵Institute of Epidemiology and Medical Statistics, Makedonia

Objective: To examine associations between experience of physical, sexual and emotional abuse and household dysfunction among a sample of students in Republic of Macedonia.

Methodology: The Family health history questionnaire, used in this study, consists of 68 questions examining various types of child maltreatment, childhood adversities rooted in household dysfunction and risk factors. The sample size consists of 1277 respondents, students attending the last year of secondary education in the country (663 students) and students attending first and second year of university in four universities throughout R. Macedonia (614 students). This sample represents 2.5% of the population of secondary school students attending fourth year, and 2% of the university students attending first and second year of university studies.

Results: Female and male respondents were exposed to household dysfunction mainly reflected in abuse of their mothers by her partner, almost equally affecting female (22.4%) and male respondents (21%) in terms of pushing, slapping or throwing something at her. Next comes living with someone who was alcoholic, 10.4% girls and 11.7% boys, a family member being mentally ill or depressed, 6.3% girls and 5% for boys, a family member committing a serious crime, 4.3% for girls, and 4.5% for boys. Most associations between mother's abuse and being psychologically, physically, emotionally and sexually abused as a child were statistically significant for $p < 0,05$.

Conclusion: Primary prevention of adverse childhood experiences and improved treatment of exposed children could reduce the risk of health and mental health consequences of violence during the life course.

P06-01

Traumatized children of Kosovo war and their key psychopathology

Barth, Gottfried Maria¹; Shala, Rexhep²; Klosinski, Gunther²

¹University of Tübingen, Child and Adolescent Psychiatry, Germany; ²University of Tübingen, Germany

Aim: We know little about the effects of war-experiences on children especially in Europe. 1997–1999 in Kosovo many children were part of martial acts. The question is how these experiences affect their mental health.

Method: 40 children, treated in centres for traumatized children at Kosovo, were investigated by a native speaker and tested by multiple instruments including IES, depression questionnaire and painting.

Result: All children in this sample had experienced loss of important persons. More than three-quarter suffered from symptoms of PTSD 4–6 years after trauma. 90% showed severe symptoms of anxiety,

87% somatic symptoms and 80% depressive mood. Boys were more disturbed than girls and older children more disturbed than younger. Boys suffered more from depression and anxiety whereas girls had more symptoms of PTSD and psychosomatic problems.

Conclusion: Results show the long-term effects of war-experience on mental health of children. Many children need psychological help years after traumatizing experience. No protective effects of gender or age were found. The importance of sufficient health care for these children is proved by this research.

P06-02

Addressing childhood trauma during inpatient psychiatric treatment for obsessive-compulsive disorder: a case report

Kapoulas, George; Moulla, Vasiliki; Kotzia, Thekli; Charitaki, Stella; Kolaitis, Gerasimos

University of Athens Medical School, Department of Child Psychiatry, Greece

The case of an adolescent inpatient with severe OCD and mild PTSD symptoms is discussed in detail: A variety of obsessive-compulsive symptoms were present at the first referral (repeating routine activities, troublesome blasphemous or sacrilegious thoughts, rituals involving food, belief that certain personal objects are “lucky” or “unlucky”, the need to avoid stepping on cracks in the sidewalk etc). Furthermore, the patient appeared to be detached from others and emotionally numb, had sleeping problems and nightmares, expressed fear of being separated from his mother, was often irritated and aggressive. Due to his psychiatric symptoms, the adolescent suffered from bullying in school, the last year. Diagnostic difficulties and therapeutic planning peculiarities are clarified. Diagnostic tools used among others: Yale-Brown Obsessive Compulsive Scale, Child Behavior Checklist (CBCL) and Youth Self Report (YSR), Children’s Post Traumatic Stress Disorder-Reaction Index (CPTSD-RI) and the semi-structured interview Kiddie-Schedule for Affective Disorders and Schizophrenia-Present and Lifetime version (K-SADS-PL). Multimodal treatment approach (e.g. medication, individual supportive psychotherapy, social skill training, consulting with parents and family meetings) during hospitalization succeeded to significantly reduce symptoms and improved individual and family functioning. The need to address childhood trauma in the context of complex problems (i.e. psychiatric comorbidity and psychosocial adversities at family, school and community level) is emphasized. Thus, after observing and considering the development and improvement of the teenager, the need for continuing the aforementioned therapeutic process at all levels (family, school, friends, activities, social life) is made clear.

P06-03

Multicultural children in the need of intensive child care: social welfare reports and professional statements as a source of information

Huikuri, Jukka; Blatter, Marja

Helsinki Deaconess Institute, Child and Family Work Section, Finland

The starting point of the present paper is the fact that the number of children with multicultural background in intensive care is out of

proportion with their numbers in the general population in Finland. Aim of this paper is to establish whether the available background information, notably the official social welfare reports and professional statements on the child and his family, explains why multicultural children are over represented in the intensive care. The target group consisted of children in the intensive care at the Child and Family Care Section of the Helsinki Deaconess Institute. Their parents, one or both, had a multicultural background, as well as of children who belong to the Finnish Roma minority. Altogether, there were 32 multicultural children and adolescents representing 19 different cultures and speaking 14 different languages. The documents on children were gathered and analysed in 2010. The paper shows that the social welfare reports and professional statements include only minimal information on multicultural children’s and their families’ situations before foster care. It is clear that the complexity of the families cannot be easily broken down in specific statements. As a result, children’s need for intensive care remains unspecified in the written documents. The paper maintains that the treatment process must pay attention to the children’s traumatization, as many of them have experienced crisis and traumatizing events in their lives and/or their parents have been traumatized and therefore parenting children is affected. Working with these children is difficult as their emotional connection is based on another language than Finnish. Therefore, body language, sensory motorical and non-language based methods must be at the center of building connection and relationship between personnel and the child and his family.

P06-04

Bullying and victimization among 8-year-old children: a 16-year population-based time-trend study

Iloa, Anna-Marja¹; Sourander, Andre¹; Luntamo, Terhi¹; Lehti, Venla²

¹University of Turku, Department of Child Psychiatry, Finland;

²University of Turku, Finland

Aim: To study prevalence of bullying and victimization and changes in it among 8-year-old children at three time points: 1989, 1999, and 2005.

Material and methods: Three cross-sectional representative samples of 8-year-old children from South-western Finland were compared. All 8-year-old children living in selected school districts in 1989 (n = 1,038), 1999 (n = 962) and 2005 (n = 1,030) served as study samples. Study procedures were similar every sampling year. Bullying and victimization were asked from children themselves, their parents and teachers. The participation rate was 96% in 1989, 86% in 1999 and 84% in 2005.

Results: According to parental reports significantly fewer boys were bullies (24% in 1989, 13,5% in 2005, $p < 0.001$) or victims of bullying (29,1% in 1989, 17,7% in 2005, $p < 0.001$) in 2005 than in 1989. Also boys themselves and teachers reported fewer bullies and victims of bullying in 2005. Teachers reported among girls more bullies in 2005 than in 1989 (5% in 1989, 9% in 2005, $p = 0,019$). In child or parental reports there were no significant changes in number of bullies among girls. In child and parental reports fewer girls were victims of bullying in 2005 than in 1989, but the change was significant only in parental reports ($p = 0.012$). In teachers’ reports there were not any change. Children of both sexes reported victimization more often than parents or teachers at all time points. In 2005 35.3% of boys and 25.4% of girls reported being victim of bullying. In parental reports numbers were 17.7 and 11.1%, and teachers’ reports 10.4 and 6.0%, respectively. Teachers reported slightly more bullies than other informants, especially in boys.

Conclusion: The decreased level of bullying and victimization among 8-year-old boys is promising. Children themselves report constantly more victimization than other informants. Further time-trend studies are needed, as well as qualitative studies to obtain deeper understanding of bullying and the factors affecting it.

P06-05

Mental illness among survivors of Jokela High school 16 months after exposure to school shooting

Suomalainen, Laura; Haravuori, Henna; Marttunen, Mauri

National Institute of Health and Welfare, Mental Health and Substance Abuse Services, Finland

Background: Recent two school shootings in Finland have been deeply shocking. After the school massacre in Jokela High School at November 2007 we initiated a controlled follow-up study that aims to evaluate long-term effects of exposure to the school shootings. At baseline 4 months after the incident high risk for posttraumatic stress disorder (PTSD) was observed in 27% of the exposed females and 7% of the exposed males measured with the Impact of Event Scale. This study analyses incidences of mental illnesses among the survivors 1 year after the baseline data collection.

Methods: The occurrence of PTSD, partial remission of PTSD, subclinical PTSD, depression and anxiety disorders among the exposed were assessed using semi structured interview for DSM-IV diagnosis (Kiddie Schedule for Affective Disorders and Schizophrenia, Present and Lifetime Version [K-SADS-PL]) approximately 16 months after the exposure. Participation was voluntary.

Results: Of the follow-up study participants (N = 231) 54% (N = 124) were interviewed by K-SADS-PL. Immediately after the incident PTSD was observed in 23% (N = 28) of the interviewed students of which 55% (N = 16) had turned to partial remission 1–13 months after the incident. 14% (N = 17) of the students had subclinical PTSD. Depressive disorders were diagnosed in 7% (N = 9) and diverse anxiety disorders in 4% (N = 5) of interviewed students. At the time of the interview (approximately 16 months after the exposure), only 4% (N = 5) of the students in PTSD group were fully recovered. In partial remission group the symptoms persisted in 94% (N = 15), in subclinical PTSD group in 23% (N = 4) and in depression group in 66% (N = 6) of the students. No recovery among students with diverse anxiety disorders were observed.

Conclusions: Sufficient follow up of traumatized adolescents is necessary since significant proportion of students exposed to a school shooting had persistent posttraumatic symptoms 16 months after the incident.

P06-06

Relationship of childhood traumatic experiences with attachment style, affect regulation, and eating disorder symptoms

Zachariades, Fotini¹; Proulx, Genevieve²; Tasca, George¹; Demidenko, Natasha¹; Ritchie, Kerri¹; Bissada, Hany³

¹The Ottawa Hospital, Psychology, Canada; ²University of Ottawa, Psychiatry, Canada; ³The Ottawa Hospital, Psychiatry, Canada

Background: Eating disorders (EDs) can be conceptualized as being associated with insecure attachments that include hyperactivating or deactivating strategies to regulate affect. EDs may be related to an

inability in discriminating inner distress cues (i.e. deactivation) associated with food restriction, or with a hypersensitivity to social interactions (i.e., hyper-activation) that precede binge eating. Further, adverse experiences in childhood, including trauma and neglect, are also associated with both attachment insecurity and eating disorders. **Aims:** To investigate if the relationship between childhood trauma and ED symptoms and between childhood trauma and affect dysregulation is mediated by attachment insecurity in women with an eating disorder.

Materials/Methods: A chart review of 100 adult outpatients diagnosed with EDs was conducted, which included information on: exposure to abuse/trauma, bullying, neglect, and death of an attachment figure. Outpatients were assessed at an ED Treatment Program, Ottawa Hospital, Canada. For the purposes of this study, data from the following questionnaires from the intake assessment will be included: Experiences in Close Relationships Scale (measuring attachment), Childhood Abuse and Trauma Scale and Trauma Symptoms Checklist-40 (measuring trauma exposure and related symptoms), Eating Disorders Inventory (measuring ED symptoms), and the Borderline Features scale of the Personality Assessment Inventory (measuring affect dysregulation).

Results/conclusions: We anticipate that attachment insecurity will mediate the relationship between childhood trauma and ED symptoms and the relationship between childhood trauma and affect dysregulation. The results may indicate the central role of attachment in explaining the dysregulating effects of childhood trauma for women with an eating disorder.

P06-07

Bullying in childhood and adolescence

Barros Silva, Ana Carolina

Federal University of Mato Grosso/University of Porto, Psychology, Brazil

This is a synthesis of research work planned to run in a year. The objective of this project is to investigate the occurrences of bullying and possible performances (especially prevention) of psychology's professional, aimed at reducing the consequences experienced by children or adolescents who pass through traumatic situations, as can be bullying in schools and also in universities. We conducted a survey and literature review of a percentage of published scientific literature on the subject and note that these attacks, called bullying, depending on the social vulnerability of the child or adolescent, can cause physical and psychological damages for the individual. Under this assumption, the best way to proceed is interrupting the process at the beginning and not allowing this child or adolescent reach a stage that will need medical or psychological care. Where this ideal performance is not realized, many effects can appear. Research points to the sad statistics which indicates that cases of stress, depression, phobias and even suicidal and homicidal ideation. We have to treat all types of violence with due regard to prevent irreversible, as so many cases already reported in the media that ended in death.

P06-08

PTSD, comorbid disorders and other social and school problems in earthquake exposed Turkish adolescents survivors

Bulut, Sefa

Abant Izzet Baysal University, Counseling Psychology, Turkey

On May 3, 2003, a strong earthquake hit the eastern part of Turkey at 03:27 a.m. and lasted 20 s. It destroyed a regional boarding school, killed 83 students and 1 teacher. Disaster exposed children are at risk for a variety of mental health problems, social and academic problems. Therefore, the purpose of this research is to investigate to the extent of the comorbidity among earthquake survivors adolescents. One hundred and ninety one adolescents were given Child Post Traumatic Stress Reaction Index and Behavior Assessment Systems 1 year after the earthquakes. Students were identified as PTSD positive and non PTSD groups. Then, multivariate ANOVAs are conducted to test the group and gender differences on the BASC subscales. Correlation analysis revealed some significant associations between CPTSD RI and BASC subscales. Furthermore, multiple stepwise regression analysis was utilized to predict the contribution of each of the BASC SRP A subscales. Depression was the strongest contributor accounted for 23% of the total variance. The next significant contributing variable was atypicality, 6%. This was followed by sensation seeking adding of 4% variance. Finally, attitude to school made another 2% to the prediction of PTSD. These four variables all together explained 35% of the variance in CPTSD RI total score ($R=.585$, $R^2 = .35$ $P < .05$). Additionally, those variables were also correlated with CPTSD RI subscales of re-experiencing, avoidance and hyperarousal. Cross cultural implications were also discussed in reference to the disaster and other disorders.

P06-09

Treating traumatized children in child psychiatric

Rutanen, Mervi¹; Hemmi, Anna²; Mäntymaa, Mirjami³

¹Tampere University Hospital, Child Trauma Psychiatric Unit, Finland; ²Tampere University Hospital, Child Trauma Psychiatric Unit, Finland; ³University Hospital of Tampere, Finland

Our aim is to present the treating model of Child Trauma Psychiatric Unit. This unit is a part of Tampere University Hospital's Child Psychiatric Clinic in Tampere in Finland. Child Trauma psychiatric Unit was found in September 2008. We provide both in-patient and out-patient care for children with various types of severe traumas. These are for example traumatic loss, family violence, abuse and neglect etc. We treat children under the age of 14 and their families with multidisciplinary teams. We are going to present our own experiences of the three phases of treating traumatised children. These phases are stabilisation, processing trauma and integration.

P07-01

Violence and child rights: an educational-scientific cooperation between Norway and Brazil

Bordin, Isabel A.¹; Rønning, John A.²; Ribeiro, Wagner¹; Sourander, Andre²; Duarte, Cristiane S.³

¹Universidade Federal de São Paulo, Department of Psychiatry, Brazil; ²University of Tromsø, Norway; ³Columbia University, New York State Psychiatric Institute, USA

Background: The University of Tromsø (Norway) and the Universidade Federal de São Paulo (Brazil) has recently established a long-term educational-scientific cooperation including a collaborative longitudinal project (“Violence and child rights in Brazil: can the

cycle of violence be broken?”), and the promotion of scientific exchange among researchers from the two countries.

Objectives: In a probability sample of children (6–16 years) ($N = 1,400$) living in Itaboraí City, Rio de Janeiro, the study main goals are: (1) to examine the impact of child exposure to violence in their homes, schools and/or communities on child well-being (including violent behaviors, other mental health problems, general health, school performance, social and family interpersonal relationships, and expectations about the future); (2) to describe the services received by children/adolescents who have been exposed to violence (service type, frequency, adherence, duration, satisfaction) and the potential benefits of received services on child well-being; (3) to examine the role of different types of services in reducing the negative impact of exposure to violence on child well-being; and (4) to expand understanding about services for children who are victims of violence by collecting information from community members and professionals working in key services using semi-structured interviews (qualitative research).

Funding: The Norwegian Research Council is funding this collaborative initiative.

Expectations: The Brazilian research team will benefit from the expertise of Norwegian investigators on school violence, service use and the long tradition of using Rights based approach. For the Norwegian team this is a unique opportunity to learn about the existing child-related resources in Brazil and to support the expansion of care for those exposed to violence within an existing Right-based framework and service system.

P07-03

The representation of human rights in Italy in Unaccompanied Foreign Minors who are resident in Italy

Bastianoni, Paola¹; Fratini, Tommaso²; Zullo, Federico¹; Taurino, Alessandro³; Bolognesi, Anna⁴

¹University of Ferrara, Department of Human Sciences, Italy; ²University of Florence, Department of Education Sciences, Italy; ³University of Bari, Department of Psychology, Italy; ⁴Don Calabria Institute of Ferrara, Italy

Introduction: The Unaccompanied Foreign Minors (UFMs) show that the developmental rights still strongly disclaimed, in a severely disadvantaged population that requires the attention of the operators, society and institutions on the possible ways of protection and support that must be activated and guaranteed. This paper presents the results of an action research concerning the representations of human rights of a sample of UFMs accepted in residential care centres in Emilia-Romagna. The theoretical background frames the rights as a set of principles with an essential adjustment function of the human relationships, identities and limits of the individual existence among freedom, autonomy and liability in response to the basic human needs.

Objectives and methods: The aim is to explore the knowledge and the representation of perceived and experienced human rights in UFMs, in relation to their current way of life, to the re-elaboration of their experiences and to the relational/institutional experiences related to the past in the original country and to the present in our country. The research was conducted through the focus group methodology, involving 4 groups of UFMs for 2 meetings each. The meetings, lasting about 2 h each, to run in a non-directive way, has been made in the respective hosting residential care centres. The whole core of the interventions was taped, transcribed and turned in a textual corpus, subjected to content analysis with the use of T-LAB software.

Conclusions. The content analysis outlines an articulated profile of positions about the representation of human rights. Among the most significant emerging categories are those that anchor the representation of right on the one hand to the temporal perspective, to the investment of these adolescent on their future in terms of duties and opportunities, on the other hand on issues of identity, social comparison, ethnic prejudice and discrimination in relation to the social inclusion.

P08-01 Results of a specialized multidisciplinary consultation clinic for children with acquired brain injury

Bouman, Nico¹; De Kloet, Arend²; Gardien, Carey³

¹De Jutters Centre for Youth Mental Health, The Netherlands;
²Sophia Centre for Rehabilitation The Hague, The Netherlands;
³De Banjaard, The Netherlands

Objective: To show the extent of psychiatric morbidity in children with different forms of acquired brain injury (ABI).

Rationale: Care for children with ABI is often fragmented and many of these children have unmet health care needs. To improve care and knowledge of ABI in the Hague region of The Netherlands, a specialized consultation clinic for ABI was started. This is a multidisciplinary clinic with participation of a child psychiatrist, neuropsychologist, rehabilitation specialist, and a neurologist.

Methods: After screening for eligibility for the clinic, all children had a neurological, psychiatric, and neuropsychological evaluation. Results from the Child Behavior Checklist were obtained from almost all children. Based on these assessments a psychiatric diagnosis was made and a treatment recommendation was formulated. Patient feedback was obtained after the clinic.

Results: 49 children aged 6 to 23 were evaluated, 36 boys and 13 girls. Time since brain injury varied from 1 year to more than 10 years. Causes for brain injury varied from traumatic to infectious or sequelae of brain tumors. ADHD was the most frequent diagnosis ($n = 13$; 27%). Emotional disorders were frequent (depression: $n = 5$; 10%; PTSD: $n = 5$; 10%). Only seven (14%) children did not meet criteria for a psychiatric disorder. Treatment recommendations were medication for ADHD, psychotherapy for emotional disorders or parent or school counseling. Ninety percent of the parents gave a positive evaluation of the clinic. Many parents were relieved that they had a clearer view of their children's problems, sometimes after many years of uncertainty.

Conclusions: A specialized clinic for children with ABI revealed a high proportion of psychiatric disorders which were often diagnosed with considerable delay. This clinic fulfills a need for parents of children with ABI. Psychiatric aspects should be taken in account in long term follow-up of children with ABI.

P08-02 Psychopharmacology via telepsychiatry to an urban daycare: feasibility of a practice parameter

Cain, Sharon¹; Nelson, Eve-Lynn²; Spaulding, Ryan²

¹University of Kansas, Department of Psychiatry, United States;
²University of Kansas, USA

Background: The American Academy of Child and Adolescent Psychiatry (AACAP) has published a practice parameter to inform the

clinical practice of telepsychiatry based on existing evidence and clinical consensus.

The University of Kansas has provided psychiatric services to a large urban daycare since 2002. The child psychiatrists use video-conferencing to interact with patients and their parents while they are in the counseling office at the daycare.

Patients are seen for diagnostic evaluations and on-going medication management similar to patients who are seen in-person in the University's outpatient clinic.

The telepsychiatry clinic is funded by a contractual agreement in which the daycare reimburses the University for the child psychiatrist's time. The daycare has the option to discontinue the agreement if the clinic is not deemed a valuable service.

Goals: To describe a daycare-based psychopharmacology clinic via telepsychiatry.

To demonstrate the feasibility of applying a telepsychiatry practice parameter.

Methods: Development of protocols to incorporate principles of a practice parameter into the telepsychiatry daycare service, including protocols for:

1. Patient inclusion criteria and informed consent. 2. Prescribing psychotropic medication. 3. Informing families about procedures for interim care. 4. Ensuring compliance with regulatory authorities. 5. Developing outcome indicators

Results: 1. The daycare has continued the telepsychiatry service since 2002 with a increase in utilization. The service provides approximately 300 patient visits per year.

2. Protocols were successfully incorporated in the telepsychiatry practice to ensure compliance with the AACAP's practice parameter.

Conclusion: The telepsychiatry clinic provided by the University of Kansas to a community daycare has successfully incorporated the AACAP principles for telepsychiatry practice and has proven to be sustainable through a contractual agreement.

P08-05 Using multi-informant Strengths and Difficulties Questionnaire (SDQ) as a dimensional measure of child mental health

Danielson, Mia¹; Carlberg, Margareta²; Lindevall, Olle³; Larsson, Jan-Olov⁴

¹Child and Adolescent Psychiatry in Stockholm, Department of Evaluation, Sweden; ²Child and Adolescent psychiatry Stockholm County Council, Evaluation unit, Sweden; ³Child and Adolescent Psychiatry, Stockholm County Council, Evaluation unit, Sweden; ⁴Karolinska Institutet, Department of Women's and Children's Health, Sweden

Introduction: The Strengths and Difficulties Questionnaire (SDQ) is widely used in both practice and research. SDQ can be used as a dimensional measure of child mental health at intake and follow-up in CAMHS. However, there is a lack knowledge about the use of a multi-informant approach within a clinical setting in Sweden. The overall aim of this study was to get descriptive information about SDQ scores at intake in a clinical outpatient clinical setting in Stockholm. A more specific aim was to study similarities and dissimilarities between reports from parents, teachers and children from age 11.

Subjects and methods: SDQ was completed at intake in a sample of families/patients seeking help at two outpatient clinics in Stockholm during 1 year. We received SDQ from 503 parents, 185 youths, and 93 teachers, in total 533 patients.

Results: The answers in SDQ from youths and parents showed high correlations for the total score, peer problems, hyperactivity, behaviour, and emotional problems (range $r = 0.56$ to 0.60), and lower for the Impact scale ($r = 0.24$). Information from teachers and parents showed high correlations in the subscales behaviour problems, hyperactivity and prosocial behaviour ($r = 0.43$ to 0.52) and low regarding emotional problems and impact scale ($r = 0.17$ to 0.23). Youths and teachers SDQ correlated well regarding peer problems and prosocial behaviour ($r = 0.46$ to 0.48) and very low for the impact scale ($r = 0.02$).

Conclusions: Overall there were high correlations in SDQ-reports between the three informants. However there were obvious differences in their reports regarding some subscales. The clinical correlates of different multiinformant patterns of the SDQ subscales need to be studied further.

P08-06

Child and adolescent mental health service in Santiago de Compostela (Spain). Revision of clinical activity during the last 10 years

Dominguez, Dolores¹; Leòn, Tomás²; López, Pilar³; Mazaira, Jose⁴

¹University of Santiago de Compostela, Psiquiatría, Radiología y Salud Publica, Spain; ²University Pontificia of Chile, Chile; ³Child and Adolescent Service of Santiago de Compostela, Clinical Hospital of Santiago de Compostela, Spain; ⁴Child and Adolescent Mental Health Service of Santiago de Compostela, Clinicas Hospital of Santiago de Compostela, Spain

Introduction: We have studied the evolution of the consultation by children and adolescents on the Mental Health Service for Child and Adolescent that cover an area with a population of about 467,738 inhabitants (about 50,000 children and adolescents (ages 0–16)). We have started from the following observations: 1. Progressive increase of the demand of consultation. 2. Variations in the prevalence of the different disorders that children and adolescents are diagnosed of. We have studied the main characteristics of outpatients attended in our service: age, gender, and habitat, type of family and school problems and the person or institution that refers the patients.

Objectives: To answer some questions about these diagnostic variations, in relation to other influential factors such as: age, gender habitat, type of family and school problems and the person or institution that refers the patient. To describe general characteristics of the diagnostic categories more prevalent: disorders neurotics and disorders hyperkinetic.

Method: Study of the prevalence of the consultations in our Service from 2000 to 2009 both included, about 3,000 outpatients Descriptive analysis of the general characteristics We have compared percentages we have got for those variables we have studied. We have used the Pearson's Chi-square statistic test. We have used the CI-10 to define the diagnostic characteristics.

Results: An important increase has been found of the demands by children and adolescents in the latest 10 years Among the factors that can be related to this increase, the authors wonder if they could include the mechanism of derivation of the patients, from paediatric services, or school services. They observe that an important number of the outpatients are diagnosed of Codes V and Codes Z as a main diagnosis. The most frequent diagnostic categories are Neurotic and Hyperkinetic Disorders. The most severe diagnostic categories have little prevalence.

P08-07

What's in a name? Young service users express their views on a name for their local Child and Adolescent Mental Health team

McDevitt, Sara; McCormack, Aoife; Murphy, Marie; O' Malley, Caitriona; Morrissey, Lesley

Brothers of Charity Southern Service, Child and Adolescent Mental Health Service, Ireland

Aim: To establish collaborative views from young service users as to the name of their local Child and Adolescent Mental Health Team.

Methodology: Young people attending a newly formed CAMHS Team were surveyed regarding their views on a team name. They were asked to evaluate the importance of service name in terms of young peoples perceptions of mental health services, willingness to attend and engagement with such services. Feedback was collected from 3 qualitative measures: Semi- structured survey questionnaires were given to attendees of all ages over a 6 week period, facilitated discussion took place with a randomised focus group, and a wall display in the waiting room allowed young people to express their preferences and comment anonymously on suggested names. Thematic analysis was carried out in order to identify common themes and preferences.

Results: 20 service users participated with an age range from 7 to 14 years. Of those returning forms or participating in the focus group 70% were females, and 30% were males. There was a clear preference for non-health/non-illness related names. Most common themes suggested by the young people included animals, nature, safety, help, hope and strength, and inclusion of the word 'team' in the title. The service names were described by young people as being influential in considering whether to access a mental health service if referred.

Conclusions: Local consultation with young people regarding the name of their CAMHS team is an important part of improving access and acceptability of mental health services in the community and may also help to reduce stigma.

P08-08

Drop-Out Study in a clinical population of a Child and Adolescent Mental Health Unit of a Central Hospital in Lisbon, Portugal

Rebordão, Cristina; Goldschmidt, Teresa; Cepeda, Teresa

Child And Adolescent Mental Health Unit, Child and Family Department-Hospital Santa Maria, Portugal

Quality of health care is one of the most important aims in health action and health services functioning. In child mental health, beyond the child treatment it is also useful to understand the reasons for drop-outs and its impact in the child and family condition, in order to better adjust to their needs. The aim of this study is to know the reasons for drop-outs given by the families in the clinical population of our Child and Adolescent Mental Health Unit of Hospital de Santa Maria, in Lisbon, Portugal, knowing we have above 25% of drop-outs in a total of 292 cases. Phone contact was used to access the families evaluated for the first time in our Unit between the 1st January 2009 and 31 December 2009, using a simple questionnaire built by ourselves.

P08-09

Requesting and rejecting an appointment at an outpatient child psychiatric clinic: observations from 2005 to 2009

Tsamadou, Eftychia; Emmanouilidis, Anastasios; Kasektzidou, Anatoli; Mina, Styliani; Ioannou, Monica; Karagiannaki, Ioanna

Hippokratio GH, Thessaloniki, Greece

Objective: A public outpatient child psychiatric clinic receives a variety of appointment demands, however, a lot of times, after the first communication, usually through telephone, and the initial expression of the request, the family interrupts their cooperation with the clinic. This study aims to examine the characteristics of these requests as well as the reasons for the rejection of the given appointment.

Methods: The archives of the clinic of the years 2005–2009 were researched for the above cases and specific data were collected, including sex, age, family condition, reason for the appointment. Then a random sample of these families (10%) answered a specifically designed questionnaire during a telephone communication.

Results: During these 5 years, the clinic received 5,505 requests for appointment in total. However, 894 patients (16.2%) did not appear in their first arranged appointment, without major differentiation through the years. From these latter patients, 583 were boys and 311 were girls with a mean age of 9.1 years. The reasons for addressing the clinic included learning difficulties (45%), speech problems, as phonological disorders and delayed language development (25%), emotional difficulties or behavioral problems (15%), and other problems, such as mental retardation, autism, eating disorders etc. The main reasons for their not appearing is the delay at the arrangement of the appointment and addressing to other services, while in 11% of the cases, the problem was solved without intervention. From those who addressed other services, 45% turned to private practice, whereas 55% to other public services.

Discussion: Patients not attending the arranged appointment constitute a problem that reduces the efficient use of time and influences negatively the quality and speed of the offered medical care. A more profound understanding of this problem could improve the effective use of mental health services.

P08-10

The frequency of Internet use in Japanese female junior high school students and the association between Internet addiction and mental health problems

Yamawaki, Aya¹; Ogura, Masayoshi²; Hamada, Shoko³; Honjo, Shuji⁴; Sourander, Andre⁵; Kaneko, Hitoshi⁴

¹Nagoya University, Graduate School of Education and Human Development, Japan; ²Naruto University of Education, Japan; ³Nanzan University, Faculty of Humanity, Japan; ⁴Nagoya University, Center for Developmental Clinical Psychology and P, Japan; ⁵Turku University, Department of Child Psychiatry, Finland

Objective: This study aimed to examine the frequency of Internet use in Japanese female junior high school students. Further, we examined the association between Internet addiction and mental health problems.

Method: The participants were 310 Japanese female junior high school students (mean age: 13.93 years), who were required to complete the Internet Addiction Test (IAT), Strengths and Difficulties Questionnaire (SDQ), and scales on eating problems and self-

injurious behavior experiences (self-cutting). **Results:** Approximately 30% of the participants used the Internet everyday. Moreover, they often used dynamic moving images among other Internet application software. Multiple regression analysis revealed that Internet addiction moderately influenced SDQ and eating problems and inversely correlated with self-injurious behavior experiences.

Conclusion: Our findings suggest that Japanese female junior high school students were familiar with the Internet. The Internet might be a risk factor in aspects of mental health, such as emotion, behavior, and eating.

P08-11

Evidence-based care in Singapore (part of Symposium on Out of Office, into the Community)

Harper, Gordon¹; Fung, Daniel²

¹IACAPAP, USA; ²Institute of Mental Health, Singapore, Singapore

In 2007, the Ministry of Health and the Ministry of Education of Singapore began a community mental health programme called “Response, Early Intervention and Assessment in Community Mental Health for Students” (“REACH”). The aims were to train and support school counselors in the early identification and support of children with behavioral and emotional difficulties. REACH was designed to minimize stigma associated with seeking mental health services. Using the school counselor as a resource, schoolteachers and staff are taught to identify and manage problems early. At the same time, a network of family doctors and social services agencies within the school’s vicinity are form a network of community support for students and their families. The REACH team, working closely with each school, identifies youth at risk for behavioral and emotional disturbance including violence and works to get these young people and their families into services. REACH also works to reduce school drop-out and partners with local (NGOs) that serve drop-outs. REACH provides training to NGOs on risk indicators and assists them in developing services for these youth. REACH uses tools and resources designed for use in tertiary settings and modified for use in the community, such as the Social Problem-Solving Skills Training (SPSST) developed for use with Asian aggressive children and youth. The SPSST intervention program consists of nine lessons that aim to teach aggressive youth and children coping skills for anger control, conflict management, and problem-solving.

P08-12

Partnerships for CAMH Training in Africa (part of Symposium on Out of the Office, into the Community)

Harper, Gordon¹; Omigbodun, Olayinka²; Robertson, Brian³; Belfer, Myron⁴

¹IACAPAP (International Association of Child and Adolescent Psychiatry and Allied Professions), USA; ²College of Medicine, University of Ibadan, Nigeria; ³University of Cape Town, SOUTH AFRICA; ⁴Harvard Medical School, USA

Background: The International Association for Child and Adolescent Psychiatry and Allied Professions (IACAPAP) promotes the study, prevention, treatment, care and rehabilitation of mental disorders and disabilities of children and adolescents. One method is study groups,

particularly in developing regions, to strengthen child and adolescent mental health (CAMH) in these resource-poor settings. Study groups have been conducted by local faculty in partnership with experts from better-resourced regions of the world.

Aim: To describe study groups held in Africa in 2007 and 2009 and to analyze the impact on CAMH on the continent.

Methods: Analysis of documents, reports, evaluations and correspondence from alumni and faculty.

Results: The aim of the study groups remained the same in both years. The specific objectives changed based on the needs of the participants. In 2007, the focus was advanced training in leadership, strengthening personal commitment to work together to promote CAMH in Africa and enhancing collaborative links at local, national, regional and international levels. The establishment of the African Association for Child and Adolescent Mental Health followed the 2007 study group, helping to sustain collaborative links within the continent and with IACAPAP. The 2009 study group built on the first one, especially as a substantial number of alumni returned. The objectives of the 2009 study group were strengthening the participants' clinical and problem solving skills, and widening the scope of therapeutic interventions they are able to deploy. More than 80% of alumni are actively working in CAMH. Some have enrolled for advanced formal training in regions with facilities for such. Service development, research activities, more training programmes are reported throughout the region.

Conclusions: These two IACAPAP study groups have promoted the development of effective and sustainable CAMH care in Africa and the impact is still growing.

P08-13

Families with parental physical and mental health issues, substance use and poverty (part of Symposium on Out of Office, into the Community)

*Harper, Gordon*¹; *Solantaus, Tytti*²; *Niemelä, Mika*³; *Sipilä, Marianne*⁴

¹IACAPAP (International Association of Child and Adolescent Psychiatry and Allied Professions), USA; ²National Research and Development Centre for Welfare and Health, Finland, Finland; ³National Research and Development Centre for Welfare and Health, Finland, Finland; ⁴National Research and Development Centre for Welfare and Health, Finland, Finland

The paper presents the theoretical basis and practical design and actions of the Effective Child and Family Programme II and discusses its implementation. The programme aims to build community-based services across health, social and educational domains and to create respective municipal strategies and policies. It is argued that the division of psychosocial services into health and social services is outdated in view of the latest knowledge on child development and treatment and prevention research. Difficulties working across sectors are longstanding and well known, and are not solved by networking alone. An infrastructure with a system of reporting, a budget and training is needed, as well as abolishing some sectoral lines. There are four elements in our Program meant to produce system change. First we select an important and urgent public health problem in the community, the solution of which demands change. In our Program, children and families with parental mental health and substance use issues, unemployment and poverty are an example, they challenge multiple sectors to act together. Second, we include all levels at the same time, create municipal strategies and infrastructures while working with parents, children and families. Third, we develop methods that the families agree

with and which take the work in the intended direction and produce the desired change at the grass roots. Fourth, we provide joint training and supervision across sectoral, professional and hierarchical lines. The Effective Child and Family Programme II is a component of the government "Kaste" programme, the aim of which is to bring services to children and the responsible adults in their natural contexts-home, kindergarten, pre/school, leisure time environments-and build collaboration across sectors and hierarchical structures.

P08-14

Out of Office, into the Community

Harper, Gordon

Chestnut Hill, MA, USA

This symposium consists of three presentations by Gordon Harper. 1680221 Harper, Gordon Evidence-based care in Singapore (part of Symposium on "Out of Office, into the Community" 1680225 Harper, Gordon Partnerships for CAMH Training in Africa (part of Symposium on "Out of the Office, into the Community") 1680226 Harper, Gordon Families with parental physical and mental health issues, substance use and poverty" (part of Symposium on "Out of Office, into the Community")

P08-15

Adolescents' questions on an internet-based self help program

*Anttila, Minna*¹; *Kurki, Marjo*²; *Koivunen, Marita*³; *Hätönen, Heli*⁴; *Välimäki, Maritta*⁵

¹University of Turku, Finnish Post-Graduate School in Nursing Science, Finland; ²University of Turku, Primary Health Care Org of the City of Vantaa, Finland; ³Satakunta Hospital District, Finland; ⁴University of Turku, Department of Nursing Science, City of Imatra, Finland; ⁵University of Turku, Department of Nursing Science, Hospital District of Southwest Finland, Finland

Background: The importance of innovative information and communication technologies in different treatment specialities has increased. Adolescents are willing to use the Internet for mental health information, which could be a viable source of support for them. The programs developed for the use of adolescents suffering from mental health problems need special tools because of adolescents' vulnerability and risk of exclusion. There is a need to encourage adolescents to make questions, to support them and their communication skills online in a flexible and easy way.

Aim: To explore the questions concerning program use from adolescents on an Internet-based self help program developed for them.

Materials and methods: The data was gathered between December 2008 and December 2010 from adolescents' questions on an Internet-based self-help program. The program was funded by the Academy of Finland (2006–2009), developed for use of adolescents treated in outpatient psychiatric care units in Finland. The adolescents suffer from depression or anxiety disorders and are aged between 15 and 17 years. Out of 72 adolescents using the program, eight of them made 16 questions which are analysed here with content analysis.

Results: Adolescents wrote down a variety of questions on a question corner of the program. These questions involved ways to use the program, concerns that adolescents started to reflect after they had

studied the information on the program, or their right to refuse treatment offered to them. Adolescents were also keen to get feedback from the moderators, who were researchers in psychiatric nursing. They were also sorry if they had been too ill to use the program.

Conclusions: Information received gives knowledge about how important it is for adolescents to have an opportunity to make questions online. The role of a moderator is important to answer such questions immediately, to assist them to use the program and to ensure that adolescents use the program safely.

P08-16

The comparison of two distant areas in Japan on depression, self-esteem and deliberate self-harm in lower secondary students

*Kiyota, Akio*¹; *Kozasa, Sachiko*²; *Imaizumi, Kyoko*¹; *Izumi, Tatsuro*¹

¹Oita University, Department of Pediatrics, Japan; ²Tokyo Gakugei University, Department of Education, Japan

Backgrounds: Self-reported questionnaires are often used to investigate the prevalence rate of depression and deliberate self-harm (DSH). In the present study, the same questionnaires were administered in two distant areas in Japan to examine the regional differences.

Methods: Subjects were composed of two groups. Group A consisted of 982 students in city A in Kyushu region, Group B consisted of 544 students in city B in Kanto region. Self-questionnaires including Depression Self Rating Scale for Children (DSRS-C), Rosenberg Self-esteem scale and original questions on experiences of several problematic behaviors including DSH were handed and collected by the teachers. This study was approved by the research committee of Oita University, Faculty of Medicine.

Results: Average DSRS-C were 10.6 in Group A and 10.4 in Group B and average Rosenberg were 25.5 in both groups. No statistical differences were observed even in the subgroup comparison of grade and sex. The overall experience rate of Cutting were 10.5 and 8.6%, respectively, overdose were 3.2 and 3.4%, self-burn were 2.3 and 1.1% and scratch were 25.7 and 20.9%. No statistical difference was found between two groups except for Scratch. As for the related factors, life-time prevalence of smoking, school-bullying, violence to others and peer-help are statistically different between two groups. Life-time suicidal idea of group A was 28.7% that is almost significantly different from that of group B (24.1%, $p = 0.051$).

Discussion and conclusion: The present study showed that there were no major differences between two distant groups with regard to level of depression and self-esteem and prevalence of DSH except for scratch. Our study also showed no statistical difference in suicidal idea but more research should be necessary due to small p-value. Because the prevalence of depression and DSH was similar to those of previous studies, there might be no regional differences among lower secondary students in Japan.

P08-17

Child and Adolescent Mental Health Care in Greece: results from the CAMHEE Project

*Kolaitis, Gerasimos*¹; *Fissas, Konstantinos*²; *Tsiantis, John*²

¹Athens University Medical School, Department of Child Psychiatry, Greece; ²Association for the Psychosocial Health of Children and Adolescents (APHCA), Greece

We present findings from the “Child and Adolescent Mental Health in Enlarged European Union-Development of effective policies and practices” (CAMHEE) Project (2007–2010) concerning patterns of Child and Adolescent Mental Health Care in Greece. During the last two decades, the mental health care system in Greece underwent a dramatic change; the implementation of the EEC Reg. 815/84 program contributed to a significant shift towards the extramural care and rehabilitation of patients with long term mental health problems. The child and adolescent mental health (CAMH) care system was transformed by this change but to a lesser degree. Despite bureaucratic and other difficulties, a substantial number of CAMH outpatient services have been developed in Greece; nevertheless, there are still extended areas of the country, mainly out of the larger cities, without CAMH services, while many of the rest of them occupy less staff than required. In addition, the existing services focus on providing assessment and to some extent therapeutic interventions while CAMH prevention and promotion are not yet perceived as priority areas. At the same time, there is a lack of specialized day care services for populations with specific problems eg. autistic spectrum disorders and/or intellectual disabilities. Lack of specific policies, lack of sufficient funding, lack of data on the national level, and lack of co-ordination in different levels constitute the most important obstacles in effectively delivering CAMH services in Greece. Education and research in the field of CAMH are also in need of further investment and development. Unfortunately, the current economic crisis has affected both the development of new services and the optimal functioning of those already in operation. Nevertheless, Greece must invest more in CAMH and the rights of the children and young people should be protected.

P08-18

CAMHS outcomes evaluation at the transition to adult services

*Palazzi, Stefano*¹; *Perini, Paola*²

¹Ausl and University of Ferrara, Child-Adolescent Mental Health and Rehabilitation, Italy; ²Opera Don Calabria Città del Ragazzo, Ferrara, Italy

At 18 years of age, clinical seriousness and social complexity seem difficult to tear apart, but it is when services may offer prevention for the mental health complications of long-term conditions and local authorities forecast the costs of assisting adults with special needs. At that regard we present the experience of monitoring the referrals to adult services over 1 year.

Material and methods: The sample included a comprehensive service covering both mental health and intellectual disability problems from a target population of 50,000 youngsters. Families and patients were invited to a multidisciplinary meeting in view of their transition to adults. Each meeting was prepared and followed by a report. An experienced psychologist had to be recruited to help clinicians to summarise lengthy clinical records into a few relevant pages for professionals including social workers, psychiatrists, general practitioners, special needs teachers, therapists and rehabilitators, and other specialists.

The “transition ritual” was felt innovative or potentially a waste of time by workers, whereas it was appreciated a lot by families. Much professional time had to be spent in the preparation and running of each multidisciplinary meeting. Specific training also had to be organised for service staff and general practitioner.

Results and discussion: Whether seen as the outcome of previous care or the baseline of future interventions, several elements are collected at this key point in time: a comprehensive drug history; the current functional state; the appraisal of the work done by the child and adolescence service; personal and family correlates of the diagnosed condition; future appointments plan; vocational assessment.

It was interesting to translate the C-GAS score into a GAS entry score and, crucially, it was apparent that most patients coming from medically-labelled conditions would enter social care, whereas patients referred to social services would become mental health patients.

P09-01

How the use of the SDQ in children's medical check-ups was experienced by Finnish parents, teachers and public health nurses?

Borg, Anne-Mari¹; Kaukonen, Päivi²; Salmelin, Raili³; Miettinen, Sari²; Tamminen, Tuula⁴

¹University of Tampere, Child psychiatry, Finland; ²Tampere University Hospital, Child Psychiatry, Finland; ³Tampere University, School of Health Sciences, Finland; ⁴Tampere University, Child Psychiatry, Finland

Reliable, validated and feasible methods for assessing children's mental health in front-line services are needed. In the project *Developing children's mental health work, 2007–2009*, funded by the Ministry of Social Affairs and Health in Finland, questionnaire-based methods for this purpose were tested and developed. *The Strengths and Difficulties Questionnaire (SDQ)*, a behavioural screening questionnaire for 3–16-year-olds, was one of the tested methods in the project.

The aim of the study was to examine the usability of the SDQ as experienced by parents, public health nurses and teachers in day care and in schools in the context of children's regular health check-ups.

The survey was carried out in a community sample of 5–8-year-old children ($n = 4,178$) in 2008–2009. The SDQ was collected from parents and the teacher of the child. The health nurse could use the SDQ for discussion during the check-up. Afterwards the parents, teachers and the public health nurses were asked to give feedback of the method by answering to *the Utility Questionnaire of the SDQ*, which was developed for this study.

All respondents (parents $n = 1,546$, teachers $n = 1,405$, public health nurses $n = 156$) evaluated the SDQ to be an appropriate method for assessing child's mental health. Of the public health nurses 37% found the use of the method to be rather burdening. Parents experienced the using of the SDQ positive and this was noticed by the other responding parties. Expectations and hopes for more active dialogue on child's and family's well-being between the public health nurse and the parent was elicited in parents' informal feedback.

When implementing methods for assessing children's mental health in front-line services the aspects of ease of use, appropriateness and how the method is experienced have also to be taken into account. Assessing child's mental health should be a collaborative process with open and reciprocal dialogue between the family and professionals

P09-02

Promoting mental health: an experience of screening for mental problems in schools

Cianchetti, Carlo¹; Pittau, Andrea¹; Carta, Valeria¹; Campus, Grazia¹; Littarru, Roberta¹; Putzu, Luisa²; Garau, Loredana²; Sannio Fancello, Giuseppina¹

¹University Hospital of Cagliari, Child and Adolescent Neuropsychiatry, Italy; ²Neuropsychiatric Unit, Sociosanitary District 1, Cagliari, Italy

Introduction: School appears an appropriate site for screening mental health problems. In the sphere of the Sardinian Public Health Service, we carried out a screening at school.

Material and methods: We obtained authorization to administer questionnaires to children 3rd to 5th grade of primary schools. After giving preliminary information, in a group of schools we distributed about 4,000 informed-consent forms to parents; in a second, smaller group of schools, questionnaires were obligatory, as a prerequisite for participation to a program of emotional education, agreed to by all parents. Several questionnaires were used. Here we report data from the principal ones: for children the SAFA and for parents the CBCL. Children whose results on the questionnaires suggested abnormalities were indicated to parents as requiring further examination.

Results: In the first group of schools, 1598 parents consented to the screening and we obtained reliable compilation of the SAFA from 787 children. In the second group, 218 compiled SAFA. In the scales for anxiety and depression, T scores >70 were found in 55/787 of the first group and in 25/218 of the second group, with a significant difference ($p = .0012$). In the first group of schools, parent scores $> 2SD$ concerning internalizing CBCL items were 6.2%; there was little agreement between parent CBCL scores and their children's SAFA scores.

Conclusion: The study shows parents are reluctant to collaborate, even if screening was promoted by the Regional Health Administration. The higher scores for symptoms of anxiety and depression in the classes where all children responded to questionnaires, as compared to those where this did not occur due to lack of consent by many parents, suggest this refusal be due in many cases to a fear of revealing problems in their own children. Moreover, parents frequently appear to incorrectly evaluate internalizing symptoms in their children. The study was supported by a grant from the Region of Sardinia.

P09-03

Mental health education programme in a public middle school

Emmanouilidis, Anastasios; Mina, Styliani; Tsamadou, Eftychia; Karagiannaki, Ioanna

Hippokratio GH, Thessaloniki, Child and Adolescent Psychiatric Department, Greece

Objective: Although the educational curriculum of the Greek secondary education system does not include any health education programmes, it allows schools the opportunity to organize such programmes in collaboration with scientific institutions. This study presents a mental health education programme in a public middle school focusing on "Self perception-self esteem-emotions"

Methods: The programme worked through the form of an experiential group of adolescents, which included 20 15-year-old students. Six group meetings with the scientific coordinators took place, with duration of 2 h each, while in between, the group had meetings with the organizing school professor. Experiential exercises, games and role playing were used during the meetings. In the first and last meetings, the students completed Harter's Self Perception Profile for Children and a specially designed questionnaire for the evaluation of the programme.

Presentation: During the 6 group meetings, a number of issues were raised, including the perception of self by each individual, the recognition and management of emotions, the confronting and accepting of diversity and its role in creating social stereotypes. The elaboration of these issues was made possible through discussion, experiential games and role playing, so that it was more vivid and effective, avoiding theoretical presentations that would probably bore a group of adolescents.

Discussion: After the initial adaptation, the students displayed zeal and enthusiasm for the group activities and evaluated positively their experience from participating in the programme, something that was also demonstrated by the analyses of the completed questionnaires. The introduction and funding of similar programmes, properly organized, in all schools, as a child psychiatric intervention in the community, could function preventively in the mental health area.

P09-04

Behavioral attributes of female Japanese junior high school students who have experienced self-injurious behavior and who have eating problems

Hamada, Shoko¹; Ogura, Masayoshi²; Yamawaki, Aya³; Honjo, Shuji⁴; Sourander, Andre⁵; Kaneko, Hitoshi⁴

¹Nanzan University, Faculty of Humanity, Japan; ²Naruto University of Education, Japan; ³Nagoya University, Graduate School of Education and Human Development, Japan; ⁴Nagoya University, Japan; ⁵University of Turku, Finland

Objective: This study aimed to examine the behavioral attributes of female Japanese junior high school students who have experienced self-injurious behavior and have eating problems.

Method: A total of 310 female Japanese junior high school students (mean age of 13.93 years) participated in the study. The students were required to complete a questionnaire about experiences of self-injurious behavior (self-cutting), scales on eating problems, and the Strengths and Difficulties Questionnaire (SDQ).

Results: The participants were divided into four groups according to the experience of self-cutting and number of eating problems: self-cutting and high eating problem group (Group-I) (N = 11), self-cutting and low eating problem group (Group-II) (N = 13), high eating problem and no self-cutting group (Group-III) (N = 49), and no self-cutting and low eating problem group (Group-IV) (N = 234). The scores of the subscales of the SDQ were compared with the results of ANOVA. The results revealed that Group-I and Group-III exhibited higher problems on emotional symptoms and conduct problems on the SDQ than Group-IV.

Conclusion: Adolescents who have experienced self-cutting behavior and had a high number of eating problems and adolescents who have a high number of eating problems without self-cutting exhibit emotional instability and behavioral problems.

P09-06

Psychosocial abnormal situations as main diagnosis in a Swiss outpatient unit for child and adolescent psychiatry

Magklara, Konstantina; Hasler, Martina; Zollinger, Ruedi; Von Wyl, Agnes

Child and Adolescent Psychiatric Units St. Gallen, Switzerland

Background: Psychosocial abnormalities are important risk factors for psychiatric diseases in children and adolescents. Many studies report a strong association between the total number of psychosocial abnormalities in childhood and adolescence and psychiatric morbidity not only in these periods, but also in later life.

Aims: The aim of the present study is to investigate the prevalence of abnormal psychosocial situations (Axis V in ICD-10) as main diagnosis between 2000 and 2009 in a Swiss outpatient unit for child and adolescent psychiatry (CAP).

Materials and methods: Retrospective study of data about the main diagnoses of new entries presented with psychological symptoms between 2000 and 2009 in the outpatient unit of the CAP section of St. Gallen. Information was obtained through psychiatric interviews conducted during the diagnostic phase.

Results: Over the 10-year period of our study 774 (6.72%) of the 11,511 new entries had abnormal psychosocial situations as main diagnosis. The prevalence of Axis V diagnoses varied between 3.53% (n₁ = 31) in 2006 and 11.91% (n₂ = 98) in 2002. The most common Axis V diagnoses were abnormal intrafamilial relationships (21.06%, n₃ = 163) and abnormal immediate environment (21.06%, n₄ = 163) with societal stressors being the less common diagnosis (3.36%, n₅ = 26). Item 9 (stressful events/situations resulting from the child's disorder) cannot be reported as main diagnosis and was therefore excluded.

Conclusion: A significant number of children and adolescents who attend psychiatric units due to psychological symptomatology have diverse psychosocial abnormalities as main diagnosis. Preventive measures targeting children and adolescents that experience psychosocial difficulties could possibly reduce the burden of psychiatric disease not only in childhood and adolescence, but also in adulthood.

P09-07

Study on ijime among female Japanese junior high school students-traditional bullying and cyberbullying

Ogura, Masayoshi¹; Hamada, Shoko²; Yamawaki, Aya³; Honjo, Shuji³; Sourander, Andre⁴; Kaneko, Hitoshi³

¹Naruto University of Education, Japan; ²Nanzan University, Japan; ³Nagoya University, Japan; ⁴Turku University, Finland

Objective: The purpose of the present study was to examine ijime among female Japanese junior high school students and to examine the behavioral attributes of those who have experienced ijime.

Method: A total of 310 female Japanese junior high school students (mean age of 13.93 years) participated in the study. The students were required to complete a questionnaire about experiences of traditional bullying and victimization during a period of 6 months, cyberbullying and cybervictimization over a period of 6 months, and about their school environment. In addition, they had to answer the Strengths and Difficulties Questionnaire (SDQ).

Results: Of the sample, 6.2% were victims only, 5.5% were bullies only, and 2.0% were bully-victims. Further, among the 275 students who use the Internet, 0.4% were cybervictims only, 0.4% were cyberbullies only, and 0.4% were cyberbully-victims. Over half the victims and bully-victims (including cybervictims and cyberbully-victims) did not feel safe at school. The total difficulties scores of the SDQ were analyzed using ANOVA. The results revealed that victims and bully-victims (including cybervictims and cyberbully-victims) exhibit a higher number of problems on the SDQ than other students.

Conclusion: The survey suggested that almost 10% of female Japanese junior high school students have experienced ijime, but most of them have not experienced cyber ijime. Further, victims of ijime do not feel safe at school and possibly face certain difficulties.

P09-08

Prevalence of sleep disturbances and their correlation to school competence and psychological symptoms in 15-year-old adolescents

Pihlakoski, Leena¹; Markkula, Juha²; Rautava, Päivi¹; Sillanpää, Matti³; Helenius, Hans⁴; Sourander, Andre⁵; Aromaa, Minna⁶

¹University of Turku, Dept. Public Health, Finland; ²University of Turku, Department of Public Health, Finland; ³Univ. of Turku, Dept. Public Health, Finland; ⁴Univ. Turku, Dept. Biostatistics, Finland; ⁵Univ. Turku, Dept. Child Psychiatry, Finland; ⁶Turku City Hospital, Child and Adolescent Health Care Unit, Finland

Background: Sleep problems in adolescence are common, and they correlate with psychological symptoms. There is also a body of evidence that sleep problems correlate with school performance. However, studies on larger normal populations are still relatively few.

Aim: To investigate the prevalence of sleep-related problems in Finnish adolescents, and the correlation of these problems to subjective and parent-rated psychological symptoms, subjective and parent-rated school and social competence, and grade-point average.

Materials and methods: In a population-based follow-up study, at age 15, the participants' (N = 846) sleep problems were assessed with Basic Nordic Sleep Questionnaire (BNQ). Psychological problems and social and school competence were measured by self-rated Youth Self Report (YSR) and parent-rated Child Behavior Checklist (CBCL). Information on school grades was also collected.

Results: Of the adolescents, morning sleepiness was reported by 36%, daytime sleepiness by 14% and falling asleep during school day at least once a week by 4%. Sleep onset problems were reported by 9%, and poor sleep quality by 5%. Insomnia and tiredness correlated with both emotional and behavioural problems in parent- and self-ratings. Sleep problems correlated also with school, but not social, competence, and more strongly in self- than parent-ratings. Of sleep-related items, only compulsive falling asleep at school correlated with poor grade-point average.

Conclusions: The study confirms previous data of high prevalence of sleep problems and their correlation with psychological problems in adolescents. Tiredness affected particularly the self-perceived competence. All insomnia symptoms were strongly correlated with psychological distress and they should be actively addressed in school health services. However, since tiredness and in particular compulsive falling asleep seemed to have an even more severe impact on school performance, it should be considered alarming.

P09-09

Premenstrual syndrome in adolescents: frequency, severity, psychiatric co-morbidity and quality of life

Uran, Pinar; Yurumez, Esra; Kilic, Birim G.; Aysev, Ayla

Ankara University School of Medicine, Child and Adolescent Psychiatry, Turkey

Background: Despite an abundance of clinical research on premenstrual syndrome (PMS) in adult women, there is few data about PMS in adolescents who have psychiatric co-morbidities.

Aims: To study the frequency and severity of PMS in the absence of complaints about menstrual cycles and related pathologies, to investigate the psychiatric co-morbidity and evaluate these adolescent's life quality.

Methods: In a 3-month period, after excluding mental retardation, abnormal hemoglobin and thyroid levels, 45 adolescents between 13 and 18 years old, which firstly admitted to psychiatry clinic and not experienced any prior psychiatric medicine, were selected consecutively. Diagnostic assessments were based on the Kiddie-SADS-PL (Schedule for Affective Disorders and Schizophrenia for Children-Present and Life Time Version) and Premenstrual Assessment Form. Adolescents completed Pediatric Quality of Life Inventory, and their parents completed Pediatric Quality of Life Inventory For Parents.

Results: In this sample, according to the Premenstrual Assessment Form Evaluation: the frequency of PMS was 70% (n = 31)(above the score "2"), the mean of the PMS score was 2,6 (SD:1.00), psychiatric co-morbidity was 89% (n = 40). In Pearson Correlation; there was a significant negative relationship between quality of life and the severity of PMS. (P = 0.001).

Conclusion: Despite having PMS, adolescents and their parents were unaware of PMS and its effects on quality of life. Any complaints related PMS were expressed spontaneously. In the light of these results, PMS should be reexamined in adolescents by health professionals. Cultural adversities and/or overlapping psychiatric co-morbidities can play role obtaining these results.

P09-10

Psychiatric morbidity among a sample of orphanage children in Cairo

Abozeid, Mohamed; Hamouda, Mohamed; Bahry, Hashem; Elmadny, Adel; Alakbawy, Ahmed; Ismail, Aly

Alazhar University, psychiatry, EGYPT

Objective: To identify the prevalence of emotional and behavioral problems, and associated factors in children.

Methods: 1. Design: cross-sectional survey. 2. Participants and setting. This study was conducted in three private orphanages in Cairo, 265 children living in these orphanages their age ranged from 6 to 12 years and to compare orphans' development in three different care systems. 3. Instruments: a socio-demographic information form, and the Child Behavior Checklist (CBCL), were used for data collection. The IQ of the children was assessed using the standard progressive matrices test Children was clinically interviewed and psychiatric disorder were identified. Diagnoses were done according to the manual for diagnosis and statistics of mental disorder fourth version DSM IV.

Results: According to the information provided by caregivers, the prevalence of problem behaviors ranged between 64.53% among those in institutional care and the most prominent psychiatric disorders were nocturnal enuresis 23.3%, ADHD 19.62%, oppositional defiant disorder 17.36%. Age at first admission, causes of receiving institutional care, moves 2 or more times between institutions, were significantly associated with an increased risk of behavioral and emotional problems. In this representative study.

Conclusion: There is an urgent need to develop alternative care models and routine screening for mental health. The training of professionals and development of mental health services for children in institutional care should be a priority. Providing psychiatric services to them to avoid psychiatric disorders or ensure their early detection and treatment.

Keywords Orphanage care, behavioral problems, psychiatric problems.

P09-11

Personality disorders, developmental cascades and social competence

*Farruggia, Rocco*¹; *Romani, Maria*²

¹Azienda Unità Sanitaria Locale Roma A, Dipartimento Materno Infantile, Italy; ²Università La Sapienza di Roma, Italy

Background: The developmental pathways leading to personality disorders (PD) are poorly understood, but clues to these pathways come from recent research on personality disorders and normal personality development in childhood and adolescence. Extensive research demonstrates that preferred forms of cognition, behavior, adaptation, interpersonal relatedness qualities appear to interact with environmental risk factors including adverse rearing environments to potentiate the development of PD. Aims of the research is to indicate social and protective developmental triggers towards child and adolescent mental health and PD cascades

Materials: A sample of PD 51 adolescents (average age 15.2 years, 31 males and 20 females) in a Adolescents Day Hospital Unit is analyzed. Developmental trajectories, comorbidity, social, environmental risk factors and response to treatment are discussed.

Methods: Catamnestic analyses, SWAP-200-A, WISC-R, C-GAS, ICD 10, DSMIV V Axes administration.

Results: A variety of risk factors can lead to PD and yet each of those risk factors is also associated with diverse outcomes, including healthy outcomes. Social and environmental risk factors predict worst outcomes in the sample.

Conclusions: Knowing the environmental factors that have sensitized a child to PD pathways should improve the methods we use to identify PD risk, to intervene with at risk children, and to prevent the development of such a disabling form of psychopathology.

P09-12

Disorganised children: the emotional and financial cost of unidentified neuro-developmental difficulties in children and adolescents

Stein, Samuel

NHS/SEPT, CAMHS Academic Unit, UK

“Disorganised children” suffer from a wide array of neuro-developmental processing problems that actively impede their emotional, social and academic progress. Unfortunately, rather than being recognised effectively and early as having neurologically based deficits, they are most often referred to child and adolescent mental health services much later due to concerns about emotional and behavioural problems, which occur both at home and at school. By this time, their presentation has often been attributed to underlying emotional problems, family difficulties, defiance and disobedience, oppositional attitudes, difficulties with authority or deliberate attempts to be anti-social and naughty. Whilst these “disorganised children” do present with elements of ADHD, Autism, Tourette Syndrome, Dyslexia and Dyspraxia, they often fail to meet the strict diagnostic criteria for any one particular diagnosis. However, their presentation is extremely consistent with a probable, but subtle, neuro-biological deficit which is of sufficient severity to cause demonstrable difficulties day to day, both within the family and within the classroom. If these “disorganized children” can be identified early, and receive appropriate therapeutic help, they are more likely to remain in school rather than being excluded and becoming educationally marginalised. They would also be more likely to engage socially, and to avoid alternative sub-cultures and substance misuse. Several high-quality research studies have shown that \$750 spent on children’s mental health when they are under the age of 10 can alleviate the need to spend up to \$40,000 on entrenched psychiatric problems when they reach their late twenties. The aim of this presentation is therefore to highlight the needs of this very interesting, and yet often overlooked, group of children before they are negatively and unhelpfully labelled as simply being badly behaved, with an emphasis on punishment rather than on help and support.

P09-13

Do social skills and it’s relation with internalized/ externalized symptomatology differs between children aged 4–7 years old of different origin?

*Arratibel-Siles, María Luisa*¹; *Jané Ballabriga, María Claustré*¹; *Bonillo Martín, Albert*²; *CarbonAs, Jaume*³

¹Universitat Autònoma de Barcelona, Clinical and Health Psychology Department, Spain; ²Universitat Autònoma de Barcelona, Psychobiology and Health Science Methodology Dept., Spain; ³Equips Assessorament i orientació Psicopedagògica, Spain

Social skills are a primary component for a healthy development and would have influence along over the psychological, academic and adaptative functioning. It is true that social skills reflects changes in the relationships’ development with peers, but the mixing of cultural groups as a result of the highest percent of immigration and adoption nowadays, also makes imperative to expand perspectives to work and lead the needs for infant health in society. The aim of this study was to analyze the negative and prosocial social skills effects in the internalized and externalized disorders, considering the cultural diversity among children. We had expected high levels of prosocial skills and low risk symptomatology in native children, following by immigrants and finally adopted ones. Participants were children aged 4–7 years old of academic levels P4, P5 and 1st grades, recruited from 15 schools at the region of Osona, all of them from the inclusive schools program. To evaluate we used the C-TRF and TRF (ASEBA), PSC (ECI-4) and SDQ teacher version. In the first place, the study’s results demonstrate that the negative social skills, the presence of internalized or externalized symptoms and the fact of being adopted

have the highest association with psychopathologic symptoms, and second, that prosocial skills are inversely related with this ones. Therefore, this study highlight the importance of the early intervention for a pro-sociality, because it is an important factor of protection for the overcoming, decrease or prevention of significant psychopathologic traits for a continuum of healthy mental and social life. This work was possible thanks to the grant FIS-070027.

Keywords: Social skills, internalized symptomatology, externalized symptomatology, infancy, immigrant children, adopted children, native children.

P09-14

The Italian Project “The school of Life”: Improving mental health at school with preadolescents

Di Biasi, Stefania; Tardiola, Daniela; Gabaglio, Chiara; Levi, Gabriel

University of Rome Sapienza, Child and Adolescent Psychiatry, Italy

Recent years have seen increasing professional interest in childhood and adolescent mental health research, including seeking causes of mental illness in children and adolescents and prevent mental illness in youths. The main objective of the project was to conduct in a community sample of preadolescents a screening of the psychopathological risk in order to facilitate the planning of targeted and specific psycho-educational programs to promote mental health in schools. It was decided to work in schools because the school is the ideal place to recognize problems which would otherwise remain hidden. A total of 2,045 students (11–14 years old) in the middle Italian schools were selected. The youths were assessed by self-administered questionnaires (Youth Self report and Self Perception Profile for children) in order to analyze the self-perception of their psychological functioning. The project was approved by the Italian Education, Research and University Minister and by the Lazio Region Council. The results show the presence of three populations of preadolescents that may be at psychopathological risk: internalising subjects (11.4%) externalising subjects (5%) and internalising/externalising subjects (4.2%). Internalising/externalising subjects seem more compromised in all functioning areas, especially in self-esteem and school performance. The authors speculate that this sample seems to be at higher risk of evolution and then should be recognised early to prevent the occurrence of more severe problems. The data may be useful for initiating programs to promote mental health and prevent mental illness in schools.

P09-15

The distinction between social and psychological realities as the crucial methodological point of the CoPsyEnfant cross-cultural study

Druzhinenko-Silhan, Daria¹; Girerd, Christel²; Dufour, Véronique¹; Lesourd, Serge¹

¹University of Strasbourg, Psychology, France; ²University of Strasbourg, France

Aim: The “CoPsyEnfant” cross-cultural study investigates how children and adolescents form their identity in current social and family conditions in different societies.

Methodology: The study took place in France, Russia, Brazil, Vietnam, Canada. The research included two stages: 1. collection and analysis of data acquired during the collective investigation. 2. collection and analysis of data acquired during the individual investigation.. The second stage involved the collection of data through individual interviews.

Instruments: *1st stage:* 4 drawings: spontaneous, human-figure, real family, imaginary family The protocol was carried out in school classes. We used a special analysis grid for drawings realised on Sphinx software.

Sample: 2,600 subjects (except Canada and Tunisia where this stage is underway) from 3 to 16 years old drawn from the general population. *2nd stage (France only):* The same 4 drawings accompanied by non-directive interview, TAT (or “PatteNoire” French projective test), Rorschach test. The protocol was carried out during individual encounters. We use a qualitative analysis of tests and interviews.

Sample: 180 subjects drawn from the general population.

Results: *1st stage (French and Russian populations):* 1. Rarity of representation of reconstituted (5% France, 1,2% Russia) or single-parent families (8% France, 17% Russia). 2. The difference of genders and generations are recognized by both populations but it differs, as well as the main identification figure at different ages and for different nationalities.

Conclusion: 1. Social reality is not represented on the psychic level: the actual number of reconstituted and single-parent families is over 30% in each society [INSEE report (France), 2004 and SFES report (Russia), 2006]. 2. Identity construction occurs in different ways in the two societies. The results of the 2nd stage will be presented during the Conference.

P09-16

GFP (Guided Functional Peer Support)-model

Raivio, Markus

Niemikotisti, ELVIS-hanke, Finland

GFP (Guided Functional Peer Support)-model Abstract 10.1.2010 Helsinki Finland ELVIS-project is developing new, innovative GFP (Guided Functional Peer Support)-model combining guided peer support and creative activities. The main objective is to support young adult mental health clients to find natural means of life management and social skills development, both at work and in disability rehabilitation.

This objective will support the operational peer to peer tutor as educated by professional staff. Content of functional groups are planned and guided by mental health clients themselves. Resource centrally GFP-model aims at a new type of peer-guided functional development. GFP-model has a strong theoretical background on a number of special education units. Instead of traditional disease-centered dialogue of the peer support, GFP focuses on human resources and functionality through interaction.

ELVIS-project activities and rehabilitation clients are supported by professional staff who train peer tutors to support the operations carried out jointly. “Peer tutor-manuals” are used to operate as an individual peer tool. The contents of functional groups are versatile, for example recording studio technology, music, visual arts, multimedia, sports activities and relaxation. Acting together as a group helps to strengthen social relationships and enables facing other people who are interested in similar matters. An important factor is to open learning possibilities in an individual motivated way.

ELVIS-project is working on strong co-operation with a local Youth Services Center on using their space and equipment. Other

important co-operations are made with special vocational schools to support future studying for clients. Empowering and working as a community brings new methods and opportunities to rehabilitate young adult mental health clients.

ELVIS-project is funded by RAY 2009–2011.

Keywords: Mental disability, peer support, empowerment, GFP, functionality.

P09-17

The Italian Project School of life: teachers' perceptions of preadolescent emotional and behavioural problems

Tardiola, Daniela; Stefania, Di Biasi; Gabaglio, Chiara; Levi, Gabriel

University of Rome Sapienza, Child and Adolescent Psychiatry, Italy

In Italy, about the 8% of preadolescents show affective and behavioural disorders. Although psychopathological problems can affect everyday well-being, only a minority of children and adolescents with disorders receive help from the mental health service. The main goal of this study was to assess teachers' perceptions of emotional and behavioural problems reported by a community sample of students in order to promote programs focusing on teachers' recognition of psychopathological difficulties. In urban areas of Lazio, a total of 2,045 students aged 11–14 years and 220 teachers were recruited. In order to analyse the occurrence of psychopathological problems according to teachers and students, YSR and TRF were used. For each student, two different teachers (of humanities and scientific subjects) filled in the questionnaires. Then, the results of YSR and TRF were compared, to evaluate levels of agreement between teachers and students and between teachers of different subjects. Students referred a prevalence of disorders ranging from 2.9% (ADHD) to 7.3% (Anxiety disorders). According to teachers, the percentages of disorders varied from 0.6% (Conduct disorders) to 4.4% (Anxiety disorders). The level of agreement between teachers and students and between humanities and science teachers were low or modest; overall, teachers were found to recognize more externalising problems than internalising ones. The results of this study seem suggest that teachers experience difficulties in identifying students who show real psychopathological difficulties. Prevention implications are discussed in the work.

P10-01

Externalizing behavior at age 15: relations with productive activity, maternal sensitivity and harsh parenting from infancy through adolescence

Bradley, Robert¹; Corwyn, Robert²

¹Arizona State University, School of Social and Family Dynamics, USA; ²University of Arkansas at Little Rock, USA

Background: Antisocial behavior carries negative consequences for both individual and society. In a previous study (Bradley and Corwyn, 2007) we found that child self-control (SC) mediated relations between maternal sensitivity, productive activity, and parental harshness for mother and teacher reported externalizing behavior (EXT) at 5th grade.

Aims: This study examines how the same parenting factors (infancy through adolescence) relate to EXT at age 15, using SC and blood pressure (BP) as mediators.

Materials and methods: Data were from the NICHD Study of Early Child Care and Youth Development (N = 1,364 from 10 sites in the US). Sensitivity was observed at 5 points from 6 to 54 months and at age 15. Productive activity and harshness were assessed 4 times from 6 to 54 months and at age 15 using HOME. SC and EXT were measured using adolescent and parent report. BP was measured at age 15.

Two SEM analyses were performed (1. adolescent report of EXT, 2. parent report).

Results and conclusions: All 3 parenting variables were related to mother-reported EXT at age 15, but SC and BP did not function as mediators. For adolescent-reported EXT, the path from productive activity was significant and SC functioned as a mediator.

At age 15 (like 7 and 11), we found that sensitivity, harshness, and productive activity were implicated in EXT; but patterns varied depending on whether parents or adolescents reported on EXT. In general, sensitivity and harshness were weaker predictors at age 15 than at earlier ages. The consistency of findings from early and middle childhood (Bradley and Corwyn, 2005, 2007) to adolescence is not surprising. It likely reflects the stability of the home factors, the outcome (EXT) and the mediator (SC). The overall pattern suggests that adolescents become more self-determined as regards the likelihood they will engage in problem behaviors. This gradual shift has implications for both prevention and intervention efforts aimed at reducing antisocial behavior.

P10-02

Parent reported behavioural problems in a Finnish community sample of preschool and school-aged children

Fontell, Tuija¹; Simola, Petteri²; Aronen, Eeva³

¹Helsinki University Central Hospital, Psychiatric Clinic for Small Children, Finland; ²City of Hyvinkää, Finland; ³University of Helsinki, Finland

Background: Conduct problems in children are a challenge to child psychiatry where the human and economical advantages of prevention and early intervention have been acknowledged. We need adequate and specific measures to track the most important features of alarming conduct problems and the desired positive outcome. Cultural differences in parental attitudes towards behavioural problems may affect measuring and national standards are thus needed.

Aims: The aim of this study was to evaluate behavioural difficulties in 4 to 11 years old children and to form national Finnish standards for Eyberg Child Behaviour Inventory (ECBI).

Materials: We formed a random initial sample of 5,000 Finnish speaking children based on national statistics of regional distribution of population to resemble Finnish society. 1,715 parents (34%) participated and filled in Eyberg Child Behavior Inventory (ECBI) through an internet based individual password protected inter-face (Digium) or filled in paper versions of the questionnaire. The sample consisted of 870 girls and 845 boys. 39% of the children (n = 668) were under school age (4–6 years old) and 1,047 were attending primary school (7–11 years old).

Methods: Eyberg Child Behaviour Inventory (Eyberg and Pincus, 1999) lists 36 problem behaviours commonly reported by parents of children with conduct problems. The inventory assesses behaviour on

two dimensions. The Total Intensity Scale ranges from 36 to 252 and sums up intensity scores ranging from 1 (never) to 7 (always). Total Problem Score (range 0 to 36) sums the number of “yes” answers in response to the question “Is this behaviour a problem for you?”

Results: Clinical cut points for highest 10% on Total Intensity scale and on Total Problem Scale and frequencies of the problems will be presented for boys and girls in preschool-age (4–6 years) and school-age (7–11 years).

P10-03

Do the effects of treatment of children and adolescents with conduct problems last? A meta-analysis

Fossum, Sturla¹; Jensen, Peter S.²; Handegård, Bjørn Helge³

¹University of Tromsø, RKBU-Faculty of Medicine, Norway;

²REACH Institute, USA; ³University of Tromsø, Norway

A meta-analysis of long-term treatment effects of 60 studies including 2,704 disruptive children and adolescents were done. The overall weighted effect size (ES) in conduct problems showed a reduction of ES = 0.08 after treatment termination for a mean follow-up period of 8.4 months. Overall weighted ES at post-treatment showed a reduction in conduct problems equivalent to 0.63. There was a small deterioration of ES = -0.05 on the mediator at post-treatment and the overall effect at post-treatment was 0.65. The moderator analysis confirmed that treatment effects in conduct problems and the presumed mediators were related, but only nine studies performed some test of whether the changes actually were related. Few studies included teenagers and our knowledge of lasting treatment effects for older children is limited. Consequently, more knowledge of lasting changes in conduct problems is required, in particular for older children, as is better knowledge of the presumed mediators.

P10-04

The effect of treatment on multiple symptom domains and quality of life in children and adolescents with ADHD: a 3-year follow-up study

Gurkan, C. Kagan¹; Yurumez, Esra¹; Akca, Omer Faruk²; Bilgic, Ayhan³; Turkoglu, Serhat⁴; Kilic, Birim G.¹; Aysev, Ayla¹

¹Ankara University, Department of Child and Adolescent Psychiatry, Turkey; ²Gulhane Military Medical Academy, Department of Child and Adolescent Psychiatry, Turkey; ³TC Ministry of Health Malatya Governmental Hospital, Department of Child and Adolescent Psychiatry, Turkey; ⁴TC Ministry of Health Ordu Governmental Hospital, Department of Child and Adolescent Psychiatry, Turkey

Introduction: The aim of this study was to evaluate the effect of treatment on depressive, anxiety, obsessive-compulsive symptom domains and quality of life in a group of children with ADHD, and to explore the differences between individuals who quitted treatment and those who stayed on during the last 3 years.

Methods: Twenty children and adolescents with ADHD, who had initially taken part in a three-month methylphenidate treatment study, were consented to participate in the current study. They were reassessed with self-report instruments in terms of anxiety, depressive and obsessive-compulsive symptoms and quality of life after 3 years

after their treatment commenced. Fifteen of the children continued to use medication. Changes in symptom domains along 3 years were evaluated by repeated measures of ANOVA. Correlational analyses were used to examine the association between the severity of the symptoms and dose and duration of the medication.

Results: Compared to beginning, medication use decreased by one third and the mean duration of medication use in children who stayed on treatment was 15.4 (SD = 10.0) months during the last 3 years. After Bonferroni correction, none of the symptoms and quality of life scores was significantly different from baseline level at the end of the 3 years (repeated measures of ANOVA, $p > 0.0125$). State ($p = 0.046$) and trait anxiety scores ($p = 0.018$) were significantly higher in subjects who quitted treatment (Mann Whitney U test). Correlational analyses yielded no significant results between the change in symptom severity and quality of life levels and duration of medication use and its dose ($p > 0.05$).

Discussion: Improvement in symptoms and quality of life during the first 3 months seemed to be lost at the third year of the treatment. Non-compliance is a critical matter to be addressed and the reasons for returning baseline functioning level even in children and adolescents who continued treatment should be discussed.

P10-05

Strongest families Finland-Canada (SFFC)—a family-based prevention and treatment program of early childhood disruptive behavior

Huttunen, Jukka¹; McGrath, Patrick²; Cunningham, Charles³; Corkum, Penny⁴; Embrett, Mark⁴; Lampi, Katja⁵; Lingley-Pottie, Patricia⁴; Ristkari, Terja⁵; Unruh, Anita⁴; Watters, Carolyn⁴; Sourander, Andre⁵

¹University of Turku, Department of Child Psychiatry, Finland;

²Dalhousie University and IWK Health Centre, Canada; ³McMaster University, Canada; ⁴Dalhousie University, Canada; ⁵University of Turku, Finland

Background: The most common disruptive behavior disorder and the one that drives long term problems is Oppositional Defiant Disorder (ODD). There is evidence that children with ODD are at much increased risk of developing life-long disorders of conduct, mood, anxiety, impulse-control, and substance abuse. Disruptive behavior disorders are among the most costly of early childhood psychiatric disorders.

Aim: There has been little emphasis on the development of cost-effective primary care focused mental health delivery systems. The goal of SFFC is to develop and evaluate an affordable, accessible and effective web-based early prevention method for early childhood disruptive behavior. The SFFC program is family-oriented and focuses on empowering parents to help their children. This project pioneers in applying existing evidence-based interventions to be offered through a modern web-based application.

Methods: The core of the intervention is the SFFC website supplemented with weekly coaching by specially trained family coach, expert advice and peer support. We will conduct a population-based randomized controlled trial (RCT) of high risk 4-year olds attending child health clinics in Turku, Raisio, Naantali and Kaarina cities ($n = 2,500$). A screening method for detecting the children at risk of ODD is under development to identify the top 20% scoring families who will be asked to participate in the RCT. Participating families will be randomized into two groups. The treatment group will receive the SFFC program for 10–12 weeks. The control group will receive enhanced usual care. Follow-up of

families will be performed at the end of the treatment period and 1 year and 2 years post-treatment.

Conclusion: Incorporating distance delivered prevention and treatment approach as part of primary health care services would decrease wait lists in child psychiatric services which in turn would improve access to these services for severe and complex cases.

P10-06

Alexithymia is common among adolescents with severe disruptive behavior

Manninen, Marko¹; Therman, Sebastian¹; Joukamaa, Matti²; Suvisaari, Jaana¹; Moilanen, Irma³

¹National Institute for Health and Welfare, Finland; ²University of Tampere, Finland; ³Oulu University, Finland

Aim: Alexithymia signifies a personality construct characterized by reduced ability to identify and describe feelings, a limited imagination, and a preoccupation with externally oriented thinking. There is evidence linking alexithymia and criminal behavior. This study aimed to examine alexithymia among delinquent adolescents.

Methods: Reform schools in Finland are specialized in working with adolescents with severe behavior problems. 47 reform school adolescents (29 boys and 18 girls) aged 15 to 18 years filled in the 20-item Toronto Alexithymia Scale (TAS-20) and the Youth Self-Report (YSR), while their foster parents filled in the Child Behavior Checklist (CBCL). The TAS-20 scores were compared to those of an extensive population sample.

Results: The reform school adolescents' TAS-20 scores were significantly higher on TAS-20 sum score ($p < .001$; $d' = 0.56$), and on both difficulty describing feelings (DDF) and externally oriented thinking (EOT) subscales. Based on alexithymia categories defined by TAS-20 cut-off scores, 21% of the reform school adolescents were assessed alexithymics, which significantly more than in the control group (8.2%); $\div 2 (1) = 9.99$, $p < .01$. 14% of reform school boys and 33% of girls met or exceeded the cut-off score, while in the control group the percentages were 6.9% for boys and 9.5% for girls respectively. The TAS-20 scores were correlated with numerous psychiatric problems, mainly in the internalizing spectrum but also with thought problems and aggression.

Discussion: Delinquent adolescents are significantly more alexithymic than general population. Alexithymia is correlated with depression, but also with thought problems and aggression. The findings raise a question of the role of the possible cognitive deficits underlying alexithymia, which will be of great interest for developing effective practical care methods. Promoting the abilities in identifying and describing feelings might prove essential in treating delinquent adolescents.

P10-07

Psychosocial and family risk factors in runaway female teenagers

Moosavi, Shokoufeh¹; Alaghband-Rad, Javad²; Shahrivar, Zahra²; Tehrani-Doost, Mehdi²

¹Babol University of Medical sciences, Psychiatry Department, Islamic Republic of Iran; ²Tehran University of Medical Sciences, Psychiatry Department, Islamic Republic of Iran

Aim: To evaluate psychosocial and family risk factors in runaway female adolescents who were hospitalized in Roozbeh hospital in Tehran.

Method: In a cross sectional study the female adolescents with a history of run away from home included the study. K-SADS semi-structure interview, SADS, Parenting Scale and PSOC were used to evaluate psychological, family and social risk factors.

Results: A total number of 23 adolescents included the study. The mean age of participants was $16\text{Å} \pm 1.42$. 35% of participants had history of run away from home more than once. More than 50% of participants had a history of suicidal attempts. In parenting scales the mean score of laxness, over reactivity and verbosity in father and mother showed no significant statistical differences. The most frequent psychiatric disorders in participants were bipolar disorder and ADHD.

Conclusion: Parenting style and psychiatric psychopathologies were the most frequent factors in runaway female adolescents.

Keywords: Runaway adolescents, psychosocial factors, bipolar disorder, Iran

P10-08

Neurophysiologic correlates in basic conditions and after a stress task among adolescents showing proactive or reactive aggression

Wilson, Sanneke¹; van West, Dirk²; Deboutte, Dirk²

¹CAPRI-University of Antwerp, Youth Mental Health Department, Belgium; ²CAPRI-University of Antwerp-UCKJA, Youth Mental Health Department, Belgium

Introduction: Past research has shown distinct relations between neuropsychological profiles and neurobiological factors on the one hand and proactive and reactive aggression on the other hand. It requires further investigation of those factors to obtain a clear insight into the origin of this aggressive behavior.

Methods: 33 male adolescents with conduct disorder (CD) and 13 age-matched healthy controls were included. A subdivision was made between proactive and reactive aggression based on the TRF1. Testparadigm consisted of the Trier Social Stress Test for Children (TSST-C)2, the determination of salivary cortisol daily curves and the sampling of salivary cortisol during the TSST-C, the determination of the heart beat and the Cambridge Neuropsychological Test Automated Battery to measure executive functioning.

Preliminary results: In basic circumstances a blunted cortisol awakening response was seen among the aggressive population compared with a normal control population, with no specific differences found when comparing the subgroups. After the TSST-C differences were found between the control population and the aggressive population. An overall difference was seen in the proactive aggressive subpopulation on both neurophysiological parameters.

Conclusion: Investigation of biological factors involving proactive and reactive aggression is of clinical importance whereas it may help to identify the predestination for developing aggressive behavior among adolescents. Found differences in subgroups outline the probability of different neurophysiological pathways of the development of proactive and reactive aggression.

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P10-09

The interplay of social competence and internalizing and externalizing psychopathology: Developmental cascades in Chinese children

Zhang, Xiao

Beijing Normal University, School of Psychology, China

This study examined developmental cascades among social competence and internalizing and externalizing psychopathology in a sample of 115 Chinese children during their transition to preschool initiated in their third years of life. Social competence was assessed at 3 months after entry into preschool (Time 1), at the end of the first preschool year (Time 2), and at the end of the second preschool year (Time 3). Internalizing and externalizing symptoms were assessed at Time 1 and Time 2. Both cross-lagged and growth-curve models were employed to test cascades across the three constructs. Children who exhibited more externalizing symptoms at Time 1 had lower social competence at Time 3 but deeper decline in internalizing symptoms from Time 1 to Time 2. Children who exhibited more internalizing symptoms at Time 1 had lower social competence at Time 2 but higher social competence at Time 3, deeper growth in competence from Time 1 to Time 3, and deeper decline in externalizing symptoms from Time 1 to Time 2. Children with more internalizing symptoms at Time 2 had lower social competence at Time 3. These cascade effects among social competence and psychopathology held across gender and proved robust to inclusion of broad individual and family process variables as covariates in the model. These findings add to the literature and suggest that cascade effects between psychopathology and social competence can be manifest in children's third years of life, which is almost the earliest age at which social competence can be measured and behavioral problems make themselves known. Moreover, findings also indicate that exhibiting internalizing and externalizing psychopathology during the period of initial transition to preschool may have both functional and dysfunctional significance for children's later development.

P10-10

Children with PDD: building individual scales for better teamworking JF Roche, F Dantoine, B Olliac CH Esquirol LIMOGES France

Roche, Jean-François¹; Dantoine, Frédérique²; Olliac, Bertrand²

¹CH Esquirol Limoges, Pole de pédopsychiatrie, France; ²CH Esquirol Limoges, Pole de pédopsychiatrie, France

In the different units of our department (teaching hospital), we are led to meet children and teenagers with PDD for diagnostic purposes on the one hand, but also for emergency treatments of behaviour impairment on the other hand. We use scales and batteries of standardized tests for diagnosis and think that this means an efficient teamworking. It seems to us that such a perspective would be pertinent for shared work between children, parents, and educative and medical units for the treatment and preventive care of behaviour

troubles. We tried to use standardized tests for that but the result was inconclusive. We then decided to try and build personal scales for each child; our first step is to obtain, through several consultations, a description of his own behaviours and symptoms, according to each person taking part in this situation; then we write an individual data sheet; a part of it is a self evaluation, the other part is established by adults but discussed with the child. This sheet is used for assessment of treatment and educational care; the child takes part in this assessment. We would like to present this experience who is still limited quantitatively; a good involvement of the family and the educational team is needed as well as the child's ability and interest for his own observation. In our practice, this tool is interesting for child's adaptation to his daily life.

P10-11

What happened... and how fix it? Resolving conflict at home and at school

Stein, Samuel

NHS/SEPT, CAMHS Academic Unit, UK

Getting on with other people can sometime be very difficult. Everyone has their own ideas about what is right, and their own thoughts about how to do things. This can lead to arguments at home or at school when people want to do things differently, or do not see things the same way. Often when this happens, people spend most of their time worrying about who did what, and who is to blame. They do not spend nearly as much time thinking about how to fix the problem. This mediation-based approach therefore attempts to change that, and to have most people spending most of their time and energy looking at making things better. However, this can only be done if people try to be fair to one another, and if they listen to each another. It may be that no-one will get everything they want, or have everything their own way. But at least everyone should get a fair share of what they want. This process is therefore for anyone who wants to spend most of their time trying to fix problems rather than spending time worrying about who is most right about something. It can be used with families at home, or in school with pupils and teachers. It can be used to sort out problems like bullying, children who are struggling in class or brothers and sisters who argue all the time. It can also be used by people of any age, even if they have a job and a boss. The aim of this poster presentation is to highlight the underlying rationale behind this negotiated approach, and to provide detailed guidance as to how it can be implemented within homes, schools and other community settings.

P11-01

Obsessive-compulsive symptoms and physical activity in patients with anorexia nervosa: possible relationships

Srebnicki, Tomasz; Brynska, Anita; Blachno, Magdalena; Wolanczyk, Tomasz; Wisniewski, Artur; Tomaszewicz-Lubdzic, Celina Elżbieta

Warsaw Medical University, Poland

Objective: To find a possible relationship between presence of OCD symptoms thematically unrelated with weight or appearance and level and characteristics of physical activity AN.

Method: 76 female patients, aged 14.76 ± 1.78 years met the DSM-IV criteria for AN at the time of admission, with no comorbid psychiatric diagnosis, completed the Polish version of the 20-item

self-report version of Leyton Obsessional Inventory-Child Version (LOI-CV). Two groups, high-risk (HR) and no high-risk (nHR), were defined according to the cut-off score of LOI-CV. Physical Activity Index (KAF) was used to assess the intensity and type of physical activity. The information obtained allowed to measure the frequency and type physical activity as well as the change of behaviors and habits before and during anorectic episode and absence of AN symptoms (activities not controlled by parents).

Results: 35 subjects (46%) were qualified to HR group and 41 (54%) to nHR group. Compared to high-risk group no high risk subjects spent much less time outside in the winter ($U = 5,760$, $p = 0.029$), spent less time studying while standing ($U = 10,371$, $p = 0.005$), used elevators more often than stairs ($U = 7,391$, $p = 0.015$). Differences between patient-perceived Activity Index ($U = 3,578$, $p = 0.061$) and the total score on Activity Index ($U = 3,334$, $p = 0.071$) were on the tendency level. Patients in nHR group scored less on both indexes compared to HR patients. Negative correlation was found ($t = -0.572$; $p = 0.026$) between the number of YES answers in LOI-CV inventory and the time spent studying at school. Negative correlation on tendency level was found between the number of hours spent watching TV or playing computer and LOI-CV Interference Score ($t = -0.458$; $p = 0.063$). Positive correlation was found between the time spent on physical activities weekly and the number of YES answers.

Conclusions: Results of the study showed that obsessiveness may be involved in the development of hyperactivity in AN patients.

P11-02

Female adolescents and body image

Burgic Radmanovic, Marija¹; Burgic, Sanela²

¹University, Child and adolescent psychiatry, Bosnia and Herzegovina; ²University, Bosnia and Herzegovina

Introduction: Many girls want to be skinny and start dieting, even earlier than before, which lead to nutritional disorders. On the other side, in social context, “skinny obsession” frustrates them, emotionally and socially.

Subject and method: Survey research was carried out among female adolescents, age of 16–17, in four secondary schools in Banja Luka (economic, medical, technology and grammar). Survey questionnaire EAT-26, modified by author, was used. Overall response rate was 1592 (90.3%) out of 1753 (total number of girls in the sample).

Results: In inquired secondary schools in Banja Luka 111 (7%) girls have body mass index $<18.5 \text{ kg/m}^2$. About 15% of all respondents, are terrified of being overweight (4.5% always, 3.2% very often and 7.2% often), while 48.5% do never have that feeling, with statistically significant difference ($V = 1008$; $T = 9.178$; $p < 0.01$). Almost 2/3 of respondents do not avoid eating when they are hungry. More than half respondents never have a problem with eating control, while less than 1/4 cannot control eating rarely. Further, 28.7% girls always, very often and often know energy value of foods intake. Among schools, the most girls (35.9%) in Secondary School of Technology know energy value of foods intake, while the least percent recorded in Economic Secondary School (24.4%), with statistically significant difference ($V = 255$; $T = 1.98$; $p < 0.01$).

Conclusion: About 15% of respondents always, very often and often avoid high calorie foods.

Discussion: This research indicate necessary education of adolescents and developing prevention programs to help them in adopting healthier nutrition and lifestyle in an earlier period of life.

Keywords: Female adolescents, nutrition, body mass index.

P11-03

Early factors in anorexia nervosa: a developmental perspective

Catone, Gennaro¹; Pisano, Simone¹; Polizzi, Miriam¹; Riccio, Maria Pia¹; Pascotto, Antonio¹; Gritti, Antonella²

¹Second University of Naples, Child Neuropsychiatry, Italy;

²University “ Suor Orsola Benincasa” Naples, Italy

Background: Anorexia nervosa is a eating disorder that usually begins in adolescence or in adulthood. Nevertheless early developmental factors may be present during childhood. This perspective is inspired by discipline of developmental psychopathology that research the relationship among several factors of normal and abnormal development across the lifespan.

Aims: To describe childhood development of a group of patients with anorexia nervosa and find any deviation from normal. To explain early developmental factors that interplay with biological and social factors in the pathogenesis of the disease.

Materials and methods: The sample consisted of ten patients (mean age 14.3), all female. The developmental assessment was performed through the administration of the interview “development trajectories assessment” (DTA) to mothers of patients. DTA describes the development as differentiated in five main areas: social development; emotional development; Ego development; Psychosexual development and super Ego development. Each area contains several sub-areas (sixteen in total). The ages examined are four: (1) 0–1.5. (2) 1.5–3. (3) 3–4.5. (4) 4.5–6 years.

Results: All patients showed diverted development trajectories. The most recurrent deviations were pleasures and fulfilments in age group 1 (75%); character traits in age group 2 (75%) both in psychosexual development; self esteem in age group 2 (62.5%); self esteem in age group 3 (50%); self esteem in age group 4 (50%) in super Ego development; autonomy in age group 2 (50%) in Ego development; separation in age group 2 (50%) and in age group 3 (50%) in social development. Conclusion the presence of recurrent deviations, especially in the psychosexual and the super ego development, and in the separation items in social development, might be very early indicators of a psychopathological risk of anorexia nervosa. Perhaps further studies on larger samples will provide more results.

P11-04

The anorexic sisters

Ersoz Alan, Burcu¹; Kul, Muslim²; Foto Ozdemir, Dilsad¹; Unal, Dilek¹; Cuhadaroglu, Cetin¹

¹Hacettepe University, Child and Adolescent Psychiatry, Turkey;

²Umraniye Government Hospital, Child and Adolescent Psychiatry, Turkey

Objective: Anorexia nervosa (AN) is a serious eating disorder seen mostly in pubertal girls and has biological, psychological, social and familial components at etiology. While the core DSM-IV criteria are intense fear of gaining weight even though underweight and refusal to maintain body weight normal for age and height; the onset and representation of symptoms vary from patient to patient. Even in the same family, siblings could have different disorders or different symptoms of the same disorder as the etiology of psychiatric disorders is mostly multifactorial.

Method: A 16 year-old patient having a 15 year-old sister and a 14 year-old patient having a 19 year-old sister were referred to Hacettepe University Child and Adolescent Psychiatry outpatient clinic for eating disorder started just after their sister's diet. The family dynamics were similar which were isolation from environment, sibling rivalry, close but troubled relationship not providing separation and individualization between family members. However, the severity of symptoms and comorbidity of our patients were different from their sister as the sisters were said to be more resistant to treatment although having more severe symptoms, perfectionist, critical and had symptoms of obsessive-compulsive disorder and depression. The treatment plan, the course of patients and possible etiology of the patients will be described.

Conclusion: As the etiology of AN is not known yet, which critical psychological, social or familial factor could make a person afraid of weight gain in biological ingredient remains debate. Also having a person with psychiatric disorder like AN effects the other members of the family. Although family and compliance play an important role in AN, it becomes more important and difficult to involve family and to provide compliance if there were more than one patient in a family.

P11-05

And then what happened? Subjective and objective recovery in eating disorder patients

Isomaa, Rasmus¹; Isomaa, Anna-Lisa²; Raunio, Frida³

¹Abo Akademi University, Social sciences, Finland; ²Department of Social and Health Care, Jakobstad, Finland; ³University of Helsinki, Finland

Background: Eating disorders are severe psychiatric disorders associated with unfavourable outcome, frequent relapse, and uncertainty regarding effective treatment. There is also a debate on what constitutes recovery in eating disorders and different definitions lead to highly varying figures. Both objective and subjective definitions are important in order to widen the understanding of recovery from eating disorders.

Aim: The aim of the present study was to analyse subjective and objective recovery in eating disorder patients five years after initiated treatment.

Method: All patients who had completed the investigation period and received a treatment plan at a specialised eating disorders unit in Jakobstad during the years 2002–2008 were eligible for the study. Data was collected at three time points: at initiation of treatment (T1), at the end of treatment (T2), and 5 years after initiation of treatment (T3). Measures at T1 included demographic data, BMI, core eating disorder symptoms, diagnosis, Psychiatric Status Rating (PSR), and Eating Disorder Inventory (EDI). Measures at T2 included duration of treatment, BMI, core eating disorder symptoms, diagnosis, and PSR. Data at T1 and T2 was collected from patient journals. At T3 participants received a questionnaire encompassing demographic data, BMI, core eating disorder symptoms, EDI, treatment, and subjective recovery.

Results: Preliminary results utilizing data on participants who initiated treatment from 2002–2005 (N = 33) will be presented at the conference.

P11-06

Obsessivity and perfectionism in adolescent with Anorexia Nervosa and obsessive-compulsive disorder

Lazaro, Luisa¹; Plana, Teresa²; Moreno, Elena¹; Ortiz, Griselda¹; Andres, Susana¹; Castro-Fornieles, Josefina³

¹Hospital Clinic of Barcelona, Spain; ²Hostital Clinic of Barcelona, Spain; ³Hospital Clínic of Barcelona, Spain

Patients with Anorexia Nervosa (AN) can also present obsessive-compulsive symptomatology, related with eating disorder or with other themes. Perfectionism is considered a trait related with the obsessive personality disorder. The objective of this study is to compare the relationship between the obsessive symptomatology and perfectionism between adolescents with AN and OCD. Forty two patients with DSM-IV-TR diagnostic criteria of OCD and fifty six patients with AN diagnoses were included in this study. Patients were adolescents between 13 and 18 years old. All patients had been under treatment a minimum of 6 months. All of them presented a stabilization of acute symptomatology and a partial remission of their disorder. AN patients showed a weight recovered. All subjects were assessed with a measure of self and social perceived perfectionism (Child and Adolescent Perfectionism Scale, CAPS), and a measure of severity and interference of the obsessive-compulsive symptomatology (Leyton Obsessive Inventory, LOI-CV). Both groups are similar in LOI-CV severity scores (AN = 10.4 + 4.3; OCD = 11.3 + 3.8; $t = -.720$, $p = .474$). Patients with AN show statistically significant higher scores in self-oriented scale of the CAPS (AN = 45.4 + 12.0; OCD = 37.8 + 8.6; $t = 2,259$, $p = .028$) than OCD patients, but not in socially-prescribed perfectionism (AN = 24.9 + 8.5; OCD = 24.2 + 8.0; $t = .313$, $p = .756$). In OCD group, there are no correlation between LOI-CV severity and self-oriented perfectionism ($r = .059$, $p = .828$) but in AN group there are correlation between these measures ($r = .428$, $p = .009$). AN patients present a higher self-oriented perfectionism than OCD patients. This measure is more specific to AN than OCD. Concern over mistakes and doubts about actions, two components of self-oriented perfectionism were related with AN. It would be necessary to complement the general treatment of the eating disorder with a therapy that specifically addresses perfectionism

P11-07

Morphometric MRI study and clinical correlations in a group of adolescents with anorexia nervosa

Nacinovich, Renata¹; Riva, Anna¹; Veggo, Federica¹; Grimaldi, Marco²; Bomba, Monica¹; Corbetta, Fabiola¹; Broggi, Fiorenza¹; Neri, Francesca¹

¹University of Milan Bicocca, Dep. of Child and Adolescent Neuropsychiatry, Italy; ²University of Milan Bicocca, Dep. of Radiology, Italy

Background: Anorexia nervosa commonly arises during adolescence and is associated with several medical morbidity. Abnormalities in brain structure are common in acutely ill adolescents with anorexia nervosa.

Aim(s): The aim of the present study is to compare cerebral volume modifications in a group of adolescents with anorexia nervosa and healthy controls, and to explore correlations between cerebral atrophy and clinical parameters.

Materials and methods: Eight adolescents aged 10–18 years meeting the DSM-IV-TR criteria for anorexia nervosa and eight healthy controls were enrolled. Patients' morphometric cerebral MRI and plasmatic hormonal data were obtained. Also healthy controls were studied by MRI.

Results: Patients' morphometric MRI showed significantly increased cerebrospinal fluid volumes and decreased total gray and white matter volumes. Decreased gray matter volume is correlated directly with degree of weight loss and indirectly with increased plasmatic cortisol. Plasmatic triiodothyronine levels are interrelated with decreased gray matter volume and with increased cerebrospinal fluid volumes.

Conclusions: Our findings suggest correlations between gray matter volume and clinical and biochemical data. In particular is supposed role of low plasmatic triiodothyronine levels in reduction of gray matter volume.

P11-08

Alexithymia and eating disorders: preliminary reports on patients... and their relatives

*Pellicciari, Alessandro; Di Pietro, Elena;
Del Bianco, Katia; Iero, Luisa; Moscano, Filomena;
Franzoni, Emilio*

University of Bologna, Child Neuropsychiatry Unit, Italy

The Authors have investigated the role of non-elaborated emotions in the development of Eating Disorders. A model including traumatic feelings, affect dysregulation, shame and dissociation as predictors of the structuring of an adverse self-image is presented. Self-report tests (A-DES, TSI-A, ESS, TAS-20, BUT) have been administered to 67 Italian subjects affected by Anorexia Nervosa. Moreover, 30 parental couples of anorexic patients were evaluated through administration of TAS20 test. Statistical analyses were performed using descriptive statistic indexes, analysis of variance, Bonferroni test, index r of Pearson, stepwise linear regression analysis. Alexithymia was found to be higher than non clinical population. The role of shame, dissociation and traumatic feelings was investigated through multiple regression analysis. A negative and statistically significant correlation was found between the patients' and the parents' levels of affect dysregulation, particularly between patients and their mothers. In conclusion the Authors state that the presence of affect dysregulation, traumatic symptoms, feelings of shame and non-adaptive uses of the mechanism of dissociation are strictly connected in the genesis of body-image disorders. The role of parents' difficulty in identifying and expressing feelings seems controversial.

P11-09

Obesity: a disorder or a culturally accepted phenomenon?

Alavi, Ali

Shiraz University of Medical Sciences, Psychiatry, Islamic Republic of Iran

It has not been passed long times since obtaining enough food was a major concern for most of the people. It has its own effects on our

cultures. Words such as "chagh" that mean "fat" in Persian are still used instead of word "healthy" and words such as "laghar" that mean "thin" are usually accompanied by the words "za'eef" or "naheef" that means weak or ill. The major concern of hosts in friendly gatherings in the Middle East region is what to cook and what to serve and the gathering usually starts and ends with eating. "All you can eat" restaurants are usually cheaper than ordinary ones. We also condition our children to associate eating with pleasure. We cannot imagine any amusement park without fast food restaurants and in these restaurants "happy meals" positively reinforce the conditioning process. Therefore, going to a trip, having long weekends, New Year holidays or wedding ceremonies are usually ended with a few more kilograms!

Thirty four to 66% of adults in the United States are overweight and obesity ranks among the major determinants of health care costs. In the Middle east region similar frequencies are reported too. It has been shown that about 70% of obese children continue to be obese adults.

Obesity has significant psychosocial consequences. It decreases quality of life and causes complaints of pain, reduce vitality, and impairment of social or occupational roles. Stigmatization, low self-esteem, higher rates of anxiety and mood disorders and complications such as bulimia nervosa are among the most important psychological aspects of obesity in children, adolescents and adults.

Some genetic (including appetite and food regulation and energy expenditure), environmental (such as inactivity and dietary changes), psychological and behavioral (including food choices, binge eating, and night eating) and medical (such as hypothyroidism, Cushing's disease, etc) factors play the roles in obesity and its treatment.

P11-10

Metabolic profiling in patients with Anorexia nervosa: variation of serum metabolites in the acute stage of starvation and after weight gain

*Föcker, Manuel¹; Timmesfeld, Nina²; Scherag, Susann¹;
Illig, Thomas³; Egberts, Karin⁴; Fleischhaker, Christian⁵;
Bühren, Katharina⁶; Herpertz-Dahlmann, Beate⁶;
Hebebrand, Johannes¹*

¹University of Duisburg-Essen, Child and Adolescent Psychiatry and Psychotherapy, Germany; ²Philipps-University, Marburg, Institute of Medical Biometry and Epidemiology, Germany; ³Helmholtz Zentrum München, Institute of Epidemiology, Germany; ⁴University of Würzburg, Child and Adolescent Psychiatry and Psychotherapy, Germany; ⁵University of Freiburg, Child and Adolescent Psychiatry and Psychotherapy, Germany; ⁶University of Aachen, Child and Adolescent Psychiatry and Psychotherapy, Germany

Anorexia nervosa is characterized by serious psychological and somatic symptoms underlying endocrinological and metabolic disturbances caused by state of starvation. Only few studies have shown disturbances in the fatty-acid and aminoacid patterns in patients with AN compared with healthy controls. Metabolomics is a rapidly evolving field, which serves as a powerful tool to identify pathobiochemical pathways specific for certain diseases. Hence, new biomarkers for diagnostics and treatment strategies have been established. The application of metabolomics in anorexia nervosa could serve as a model to understand the metabolic pathways, which are affected during starvation. We studied 163 metabolites in 29 patients with AN at acute stage of starvation and after weight gain. We compared them with 25 age and gender matched controls. After

correction for multiple testing, analysis of 163 metabolites revealed highly significant differences for 30 metabolites, when serum levels at admission were compared with those after weight gain. Disturbances in specific biochemical pathways likely reflect the complex pathophysiology of starvation. The identification of these pathways is required for further analysis.

P11-11 Screening for anorexia nervosa via measurement of serum leptin

Föcker, Manuel¹; Timmesfeld, Nina²; Scherag, Susann¹; Bühren, Katharina³; Langkamp, Markus⁴; Dempfle, Astrid²; Sheridan, Eva-Maria⁵; de Zwaan, Martina⁶; Fleischhaker, Christian⁷; Herzog, Wolfgang⁸; Egberts, Katharina⁹; Zipfel, Stephan¹⁰; Herpertz-Dahlmann, Beate³; Hebebrand, Johannes¹

¹University of Duisburg-Essen, Child and Adolescent Psychiatry and Psychotherapy, Germany; ²Philipps-University, Marburg, Institute of Medical Biometry and Epidemiology, Germany; ³University of Aachen, Child and Adolescent Psychiatry and Psychotherapy, Germany; ⁴Mediagnost, Reutlingen, Germany; ⁵The Zucker Hillside Hospital, Psychiatry Research, USA; ⁶University Hospital of Erlangen, Psychosomatic Medicine and Psychotherapy, Germany; ⁷University of Freiburg, Child and Adolescent Psychiatry and Psychotherapy, Germany; ⁸University Hospital Heidelberg, Psychosomatic and General Internal Medicine, Germany; ⁹University of Würzburg, Child and Adolescent Psychiatry and Psychotherapy, Germany; ¹⁰Medical University Hospital Tübingen, Psychosomatic Medicine and Psychotherapy, Germany

Due to their sub-normally low fat mass, leptin levels in patients with acute anorexia nervosa (AN) are well below reference levels for age and sex matched controls. This hypoleptinemia entails endocrinological and behavioural characteristics observed in AN patients during starvation. We aimed to study appropriateness of hypoleptinemia as a diagnostic marker for AN by assessing sensitivity, specificity and likelihood-ratios for different referral serum leptin levels for predicting anorexia nervosa and healthy leanness. For prediction we additionally generated a score based on a multivariate logistic model including body mass index (BMI; kg/m²) and leptin level. For this purpose we measured leptin levels in 74 female patients with acute AN upon admission for inpatient or outpatient treatment. Adolescent and adult patients were recruited according to DSM-IV criteria from two multi-center studies. Additionally, leptin levels were measured in 65 female healthy underweight students. Mean serum leptin level was significantly decreased in patients with AN compared to underweight controls (0.87 ± 0.90 vs. 6.43 ± 3.55 µg/L, $p < 0.001$). Leptin predicted AN independently of BMI; we confirmed a cut-off value in the range of 2 µg/L as having both high specificity and sensitivity. Hypoleptinemia represents a state marker of acute AN and is useful for a laboratory based diagnostic screening.

P12-01 Gender differences in problematic childhood sexual behavior

Wunsch, Katharina; Häßler, Frank

University of Rostock, Clinic for Child and Adolescent Psychiatry, Germany

As is known from theories about adults, there is a gender-typical difference between male and female sexual behavior. Various theories explain these observed and empirically founded gender differences resorting to either a psychological, biological, or socio-functional approach. Biomedical models suggest that testosterone-production influences aggressive sexual offending—but no significant difference in testosterone is found in children under 10 years. Learning theories suggest the development of child sexual behaviour problems (CSBP) by learning from environmental influences. In this study, we refer to evolutionary psychology which attributes higher aggressiveness to men and higher passiveness to women to guarantee the evolvement of genes. Especially in the field of sexual behaviour, a mere transfer of the results from studies about adult sexual behaviour to the experience and sexual behaviour of children has to be challenged. Our research question is, whether gender differences in problematic sexual behaviour of children aged 5–9 can be found. The sample consists of 309 children without known or suspected history of sexual abuse, half of which were in psychiatric treatment. Based on T-test analyses of scale scores and selected items of the Child Sexual Behavior Inventory (Friedrich 1997) and Child Behavior Checklist 4–18 (Achenbach 1991), we try to answer the following questions: (1) Is there a gender-typical difference in problematic childhood sexual behaviour in middle childhood? (2) Are there gender differences when a clinical and a non-clinical sample are compared? (3) Do we find gender-typical patterns of sexual and general problematic behavior that could be explained by evolutionary psychological theory for this age range already? The poster presents preliminary results.

P12-02 Gender differences on behavioral and emotional problems: Brazilian CBCL findings

Rocha, Marina¹; Emerich, Deisy¹; Silveiras, Edwiges¹; Equipe CBCL/6-18 2010,²

¹University of Sao Paulo, Clinical Psychology Department, Brazil;

Cultural differences pose challenge for assessment and understanding of psychopathology around the world. An evidence-based, culturally robust assessment is needed for research, for answering public health questions, and for increasing the knowledge about factors that can be associated with childhood emotional and behavioral problems, such as gender. The multicultural robustness of the Child Behavior Checklist (CBCL) has been tested in many societies, including countries in Europe, Asia, Middle East, and Africa, showing with cross-cultural consistency, that girls generally score higher on internalizing problems and boys on externalizing problems. This kind of study has rarely been done in South America. The aim of this work was to analyze the effect of gender on the CBCL scales for Brazilian children and to compare with multicultural findings, in order to verify if the pattern of gender differences found worldwide is consistent in this country. Recruited through schools from different regions in Brazil, parents of 620 boys and 608 girls, aged 6 to 11 years old, answered the form. Significant gender effects were found on 9 of the 17 scales, with effect size ranging from $<.01$ for Social Problems to $.02$ for DSM Conduct problems. On all those scales, boys scored higher than girls and, in consistency with what was found on other societies for this age group, those scales included Externalizing problems ($ES < .01$) and Total problems ($ES = .01$). The significant gender effects were in the same direction as the others societies. No significant gender effect was found for internalizing problems.

Thus, the effects of gender on CBCL scales were very comparable between Brazil and the other countries, what provides support for the multicultural robustness of the CBCL in Brazil and contributes to the understanding of gender patterns on emotional and behavioral problems worldwide. Further analyses are necessary to guaranty the validity of the instrument in Brazil.

P12-03

Comparison of problems reported by Brazilian adolescents: Gender effects

Marina, Rocha; Silvaes, Edwiges

University of Sao Paulo, Clinical Psychology Department, Brazil

Understanding youths' problems is a challenge for mental health professionals. Considering the diversity of methodologies, and the lack of consistent and significant epidemiologic data, particularly in developing countries, its hard to measure the global magnitude of the problems. One proposed way to reduce the gap between studies is to use an empirically based approach to standardize the assessment procedure. The Youth Self-Report (YSR) was elaborated for adolescents to rate their own behavior, has strong support for its validity, and high level of consistency around the world. A multicultural research, with data from 24 different countries, found more similarities than differences between societies. The same study highlighted consistencies on gender findings, with girls scoring significantly higher on Internalizing and Total problems, and boys scoring significantly higher on Externalizing problems. The propose of this study was to verify if the pattern of gender difference found using the YSR is the same in Brazil, in other to find support for the use of this standardized assessment procedure in epidemiological research and clinical practice in this developing South American country. A non-referred sample of 1,315 boys and 1521 girls, aged 11 to 18 years old, from different regions of Brazil, answered the questionnaire. Significant gender effects were found on 14 of the 17 problems scales, with effect size raging from $<.01$ for Somatic Complaints to $.06$ for DSM Anxiety problems. Girls scored higher on all scales, except Externalizing problems ($ES < .01$), Rule-Breaking Behavior ($ES = .03$), and DSM Conduct problems ($ES = .04$). Significant gender differences were not found for YSR Withdrawn/Depressed, Aggressive Behavior, or DSM Oppositional Defiant scale. Even though more studies are required to assure the validity of the instrument in Brazil, the results found are similar to other countries, and give support for the multicultural robustness of the YSR.

P13-01

The role of epigenetics in mental health disorders

Buzganovic, Igor¹; Plecevic, Vladan²

¹Institute for experimental phonetics and speech pathology, Serbia;

²Cabinet of defectology and speech-language therapy "Plecevic", Serbia

Since behaviour is caused by combinations of genetic and environmental factors, the investigation of behavioural genetics is a complicated task. Some behavioural phenotypes have a strong genetic component. Despite traditional theories of psychosis which cannot explain peculiar characteristics of complex non-Mendelian

diseases, the epigenetic model of major psychiatric disorders can. Some of traditional theories have tried to explain the various aspects of schizophrenia and bipolar disease. Such theories focus on isolated features of a disease, rather than attempting to identify common molecular mechanisms that would be consistent with the variety of epidemiological, clinical, and molecular findings. The true value of epigenetic model is its ability to integrate a variety of theories, which seem unrelated at first, into a new theoretical framework, providing the basis for new experimental approaches. However, the theoretical notions about a role for epigenetic processes in the development of psychiatric disorders do not prove such a link. So, it is necessary to move from theory into molecular research in order to test the role of epigenetics in complex psychiatric diseases. It is premature to conclude that epigenetics will lead to revolutionary discoveries in non-Mendelian biology, but it has the potential to transform understanding about the molecular etiology of complex diseases. The aim of this paper is to suggest that in complex diseases, such as psychiatric disorders, the contribution of epigenetic factors may be substantial, and that DNA sequence variations of genes should be investigated with the epigenetic regulation of genes.

P13-02

Environmental phthalate exposure and behavioral problems mediated by neuropsychological functioning in children

Park, Eun Jin¹; Cho, Soo chul²; Hong, Yun Chul²; Shin, Min Sup²; Kim, Jae Won²; Kim, Boong Nyun²; Yoo, Hee Jeong²; Bhang, Soo Young³; Cho, In Hee⁴

¹Inje University, Psychiatry; ²Seoul National University; ³Ulsan University; ⁴Gacheon University

The aim of this study is to examine the mediational role of the intellectual functioning and scores on Continuous Performance Test (CPT) in phthalate exposure to Children's behavioral problem via path analytic model. Phthalate is used commonly as a plasticizer in many devices. Previous studies on phthalate exposure to children have shown that phthalate concentration was adversely associated verbal IQ and symptoms of ADHD in school-aged children. They have investigated a relatively limited range of variables. In this study, we extended the investigation to parents-rated behavioral problem by phthalate exposure using path analysis. A total of 1,089 school aged children (mean age = $9.05_{\pm 0.7}$) has been enrolled in this study. Children's urine was collected and analyzed for phthalate metabolites. Children were assessed for the intellectual functioning and inattention/hyperactivity-impulsivity symptoms using the continuous performance test (CPT). Children's parent evaluated their child's behaviors using Children's Behavioral Checklist (CBCL). Path analysis was used to determine the relationship between variables. Path analysis models revealed differences in the variables predicting behavioral problems of Children. Increased di(2-ethylhexyl) phthalate (DEHP) metabolites concentrations had strong direct effects on Verbal IQ and Commission error on CPT. Specifically, increased phthalate concentrations measures mediated the role of verbal IQ, commission error on CPT in predicting behavioral problems on CBCL (anxiety, depression, social and attention problems, aggressive behaviors). This study suggests that phthalate exposure may cause negative effects on IQ scores and ADHD symptoms (Attention deficit Hyperactivity Disorder) especially among Boys.

P13-03 Developmental language delay among relatives of children with autistic disorders

*Pouretmad, Hamid Reza¹; Bagherian-Khosroshahi, Sanam²;
Kakaei, Yazdan¹; Molaei, Azam³*

¹Shahid Beheshti University, G.C., Department of Psychology, Islamic Republic of Iran; ²Department of Psychology, Shahid Beheshti University, G.C., Psychology, Islamic Republic of Iran; ³The Center for the Treatment of Autistic Disorders, Islamic Republic of Iran

Objective: Several lines of researches have shown subthreshold symptoms of autism among the relatives of affected children. Severe developmental language delays have been considered as one the major symptoms of autistic disorders. This study was aimed to explore any possible developmental language delay among the first to third degree relatives of children with autism.

Method: Seventy four medical files of children with autistic disorders admitted to the Center for the Treatment of Autistic Disorder were reviewed. More detailed information about a history of developmental language delay among relatives of autistic child were taken from their parents.

Results: A history of the delay was identified in 45 (60/81) files. There were 7 (15/55%), 11 (24/44%) and 27 (60%) cases among the first, second and third degree relatives, respectively. Out of 45 cases, 26 (57/77%) cases were among paternal relatives, 16 (35/55%) cases were in maternal relatives and 3 (6/66%) cases were among the both sides.

Conclusion: The results indicate to a heighten rate of language delays in the relatives of affected children. This not only would suggest to a subliminal symptoms of autistic disorders among their relatives, but also it should imply to genetic bases of language delays, dominantly inherited through father and paternal relatives.

P13-04 Finnish Health in Teens study-a new prospective cohort study

*Simola, Sabina; Sarkkola, Catharina; Seppänen, Veera; Roos, Eva;
Weiderpass, Elisabete*

Folkhälsan Research Center, Finland

Objectives: To start a new prospective cohort study among Finnish preadolescents: the Finnish Health in Teens-Fin-HIT-study. This will be a multipurpose cohort with the initial objective of studying the role of childhood growth environment and genetic factors, as well as gene-environmental and gene-gene interactions, on the development of overweight, obesity and disordered eating.

Methods: All children in Finland turning 11 years, starting from year 2011, will be invited to the study together with one of their parents or legal guardians. The enrolment will continue until a cohort of 40,000 children is established. Questionnaire information will be obtained on exposures, mediating factors and outcomes. Children will have the option to fill in the questionnaire on Internet or in paper format. Follow up questionnaires are planned to be sent out every 2–5 years. Information will be collected on the children's height, weight, waist circumference, symptoms of disordered eating, family environment, use of media, puberty, lifestyle related

health behaviour (e.g. diet, physical activity and sleep), and mental health (e.g. depression, OCD, self esteem). The parents are also expected to answer a separate questionnaire. Saliva samples will be collected from the children using Oragene kits. DNA will be extracted from saliva for genotyping. Some information on exposures (e.g. birth weight) and outcomes (e.g. hospitalizations for eating disorders) will be obtained using Finnish nationwide registers.

Results: The outcomes of the study will be extensive information on children's physical and mental health on a population level, with initial focus on the prevalence, and risk and protective factors of overweight, obesity, and disordered eating. The results are expected to provide information that may substantiate public health professionals on the establishments of recommendations on specific strategies to prevent or limit the impact of health inequalities on future adult health.

P14-01 Marital satisfaction and development of mothers' and fathers' parental attachment representations during pregnancy

*Ahqvist-Björkroth, Sari¹; Korja, Riikka¹; Savonlahti, Elina²;
Junttila, Niina³; Aromaa, Minna⁴; Räihä, Hannele¹*

¹University of Turku, Department of Psychology, Finland;

²University of Turku, Department of Child Psychiatry, Finland;

³University of Turku, Centre for Learning Research, Finland; ⁴Turku University and City Hospital, Department of Public Health, Finland

Parents' attachment relationship to the becoming baby is developing during pregnancy based on their earlier and present life experiences, experiences of the pregnancy and the fetus (Slade et al. 1999). Mothers' marital satisfaction is known to be one important factor to modify their prenatal attachment development (Condon and Corkindale, 1997). Whereas, the marital relationship has strong implications for fathering postnatally (e.g. Erel and Burman, 1995) but less is known about prenatal development.

The aims was to study, whether marital satisfaction is associated with prenatal parental attachment representations and, do mothers and fathers differ according to this.

Subjects: The study involves a follow-up of 146 families.

Methods: Both parents completed at the 20th pregnancy week, the Revised Dyadic Adjustment Scale (RDAS). Inclusion criteria to the study group (n = 70 couples) was that at least one of the parents evaluated marital relationship low in satisfaction (<36) and in the control group (n = 76 couples) both evaluated marital relationship as satisfying (>36). Parental attachment representations were assessed using Working Model of Child Interview (WMCI) between 28–32 gestational weeks.

Preliminary results: When 65% of the data is analyzed, show that marital satisfaction is associated (p = 0.015) with prenatal parental attachment representation. In the group of low marital satisfaction (n = 98) 57% of parents were classified as balanced, 22% as disengaged and 20% as distorted. In the group of high marital satisfaction (n = 96) 68% were classified as balanced, 26% as disengaged and 6% as distorted. Marital satisfaction was significantly associated with mothers' parental attachment representations (p = 0.021). Whereas, marital satisfaction was not significantly associated with the fathers' parental attachment representations. The final results will be presented in the poster.

P14-02

Factors associated with mother-child bonding relative to postpartum depression and relationships with parents as recollected

Fukuoka, Asuka; Wada, Kohei; Kaneko, Hitoshi; Nomura, Kenji; Hatagaki, Chie; Honjo, Shuji

Nagoya University, Japan

Objectives: This study aimed to investigate the association between mother-child bonding, postpartum depression, and relationships with parents as recollected.

Methods: The participants of this study were 72 women who had visited the Obstetric Clinic of Nagoya University Hospital between July 2000 and October 2006. The participants first completed a questionnaire measure on their relationships with parents as recollected (Sato, 1993), in their 3rd trimester of pregnancy. The mothers were then asked to complete the Edinburgh Postnatal Depression Scale (EPDS; Cox et al., 1987) when their infants were 1 month old, and furthermore, the Postpartum Bonding Questionnaire (PBQ; Brockington et al., 2001) when their children were 2 years old.

Results: Mother-child bonding assessed by the PBQ was associated with postpartum depression assessed by the EPDS ($r = .30, p \setminus .05$). Moreover, only the “distrust/rejection” subscale of the scale for rating “relationships with parents as recollected” was significantly associated with the PBQ ($r = .36, p \setminus .01$), while association was also noted between the EPDS and the “distrust/rejection” ($r = .22, p \setminus .01$).

Conclusion: Examination of the association between mother-child bonding, postpartum depression, and relationships with parents as recollected revealed associations between the “distrust/rejection” subscale and both the EPDS and the PBQ, and consequently, between the EPDS and the PBQ. These findings suggest that rejection or distrust in their own relationships with parents could be a risk factor for disorders in bonding with their own infants.

P14-03

A Nationwide study of social emotional problems in young children

Karabekiroglu, Koray¹; Uslu, Runa²; Kapci-Seyitoglu, Emine³; Özbaran, Burcu⁴; Öztop, Didem⁵; Özel-Özcan, Özlem⁶; Dogangün, Burak⁷; Gülen-Sismanlar, Sahika⁸; Görker, Isik⁹; Fidan, Tulin¹⁰; Bahali, Kayhan¹¹; Barut, Yasar¹²; Gürkan, Kagan¹³; Kilic, Birim G.¹³; Ay, Pinar¹⁴; Akbas, Seher¹; Peksen, Yildiz¹⁵; Taskin, Beril¹⁶; Bilgin, Nusin¹⁷; Cengel Kültür, Ebru¹⁸; Özdemir, Dilsad¹⁸; Iseri, Elvan¹⁹

¹Ondokuz Mayıs University, Child and Adolescent Psychiatry, Turkey; ²Ankara University, Child and Adolescent Psychiatry, Turkey; ³Ankara University, Education Faculty, Turkey; ⁴Ege University, Child and Adolescent Psychiatry, Turkey; ⁵Erciyes University, Child and Adolescent Psychiatry, Turkey; ⁶Inönü University, Child and Adolescent Psychiatry, Turkey; ⁷Istanbul University, Child and Adolescent Psychiatry, Turkey; ⁸Kocaeli University, Child and Adolescent Psychiatry, Turkey; ⁹Trakya University, Child and Adolescent Psychiatry, Turkey; ¹⁰Ataturk University, Child and Adolescent Psychiatry, Turkey; ¹¹Bakirkoy Mental Hospital, Child and Adolescent Psychiatry, Turkey; ¹²Ondokuz Mayıs University, Education Faculty, Turkey; ¹³Ankara University, Child and Adolescent Psychiatry, Turkey; ¹⁴Marmara University, Public Health, Turkey; ¹⁵Ondokuz Mayıs University,

Public Health, Turkey; ¹⁶Maltepe University, Child and Adolescent Psychiatry, Turkey; ¹⁷Private Practice, Turkey; ¹⁸Hacettepe University, Child and Adolescent Psychiatry, Turkey; ¹⁹Gazi University, Child and Adolescent Psychiatry, Turkey

We aimed to assess the prevalence of social-emotional problems among Turkish children and to identify its association with various biopsychosocial risk factors. Data from a representative sample of 1507 boys (54.3%) and 1268 girls (45.7%) aged 10–48 months are collected. The primary caregiver (the mothers [91.4%]) completed the Brief Infant and Toddler Social Emotional Assessment (BITSEA) for their children, the Brief Symptom Inventory (BSI) for themselves and a form asking information about various biopsychosocial risk factors. Based on the BITSEA, 9.3% (boys [9.1%]; girls [9.5%]) of the children were found to experience social-emotional problems. A forward stepwise logistic regression analysis was computed to investigate the predictors of cases who had a BITSEA-problem score higher than 1.5 standard deviation. Psychiatric symptom severity of the primary caregiver, physical assault towards mothers, separation from the mother for more than 30 days, psychiatric problems during pregnancy and education level of the mother were found to predict social-emotional problems. Based on the caregiver perception, 60% of the children may have psychiatric and/or developmental problems but only 33% sought advice. Caregiver reports highlights that maternal variables of mothers’ psychological well-being and their education in general including availability of support sources are very important on the social-emotional development of their off-spring.

P14-04

Type of newborn delivery affects neonatal separation behavior

Olza Fernandez, Ibone¹; Costarelli, Maria Valeria¹; Malalana Martínez, Ana María¹; Fernández-Cañadas Moril, Aurora¹; Gabriel Marin, Miguel Angel²; Pérez Riveiro, Pilar²

¹Hospital Puerta de Hierro Majadahonda, Spain; ²Hospital Puerta de Hierro, Spain

The impact different types of delivery can have on neonatal attachment behaviour has not been thoroughly investigated. The objective of this study is to evaluate the effect vaginal delivery or caesarean section can have on neonatal attachment behaviour following maternal separation.

Material and methods: Observational descriptive study approved by Local Ethical Committee. Thirty women at their first full-term pregnancy were included. All had singleton, healthy pregnancies and received epidural analgesia during labour. Twenty delivered vaginally after labour induction and ten had a planned caesarean. Mother and baby couples were recorded during 20 min in Biological Nurturing position. After at least 5 min of observation, SSC was interrupted for a few seconds, replacing the baby in the same BN position afterwards. A blind observer evaluated 4 neonatal separation reflexes (Moro, arms and legs extend and crying) and the time to calm baby’s cry after reinitiating the SSC.

Summary results: Mean gestational age was 39 weeks and in birthweight was 3297.4 ± 251 grams in the vaginal delivery (VD) and 3327 ± 345.5 g in the cesarean section (CS) group. Newborn’s reflexes were recorded at 34 ± 13.4 h of life. There was no difference in neonatal separation reflexes between both groups ($84.4 \pm 17.3\%$ of reflexes VD versus $87.5 \pm 11.4\%$ of reflexes CS). Mean time to stop

crying was 45.1 ± 62.4 s in the VD group versus 4.3 ± 4.1 in the CS group. $P = 0.009–0.07$.

Conclusions: A difference was found on behavior in an experimental situation on the second day of life between infants born by induced vaginal delivery and those born by cesarean. Further research is needed to study the effect of type of birth on newborn attachment behavior.

P14-05

Infant social behaviour, maternal sensitivity and maternal perception of the infant

*Puura, Kaija*¹; *Mäntymaa, Mirjami*²; *Leppänen, Jukka*³; *Peltola, Mikko*³; *Salmelin, Raili*⁴; *Tamminen, Tuula*²

¹Tampere University and University Hospital, Child Psychiatry, Finland; ²University of Tampere and Tampere University Hospital, Child Psychiatry, Finland; ³University of Tampere, Department of Psychology, Finland; ⁴University of Tampere, School of Health Sciences, Finland

Introduction: Observing and assessing parent-infant interaction is an important method in infant psychiatry, but most methods are too time-consuming for use in clinical practice. Particularly for primary health care personnel user-friendly infant observation methods would be of use. This study compares a relatively simple infant observation method with a more detailed method for assessing parent-infant interaction.

Methods: 42 mothers with their healthy 7-month-old infants (48% females) were videotaped in 20 min long free play situation, and infants' social interaction behaviour was evaluated with the Alarm Distress BaBy-Scale (ADBB; Guedeny and Fermanian, 2001) by two independent researchers blind to any other information on the infants. The ADBB has eight items, and scores above 4 are deviant. Maternal behaviour in the interaction was assessed with the Emotional Availability Scales, 2nd Edition (Biringen and Robinson, 1991). Mothers filled in the Edinburgh Postnatal Depression Scale (EPDS, Cox, Holden and Sagovsky, 1987) and the Infant Behavior Questionnaire (Rothbart, 1981).

Results: Higher ADBB scores were negatively correlated with maternal sensitivity (Spearman, $r = -0.71$). No correlation was found between maternal EPDS and ADBB scores, or between maternal EPDS and maternal sensitivity. No correlations were found between ADBB scores and IBQ scores, but infant distress ($r = 0.43$) and negative affect ($r = 0.44$) in the IBQ were correlated with higher maternal EPDS scores.

Discussion: The study showed a connection between maternal sensitivity in interaction and signs of social withdrawal in the infant. Maternal depressive symptoms were correlated with a more negative perception of the infant, but not with maternal sensitivity. The use of the ADBB method may increase the possibility for detecting and supporting infants whose parents are less sensitive in interaction also for other reasons than depression, and parents who have difficulties in recognising infant distress.

P14-06

Neurodevelopmental evolution and social skills in prematurity

Tsamadou, Eftychia; Emmanouilidis, Anastasios; Papadopoulou, Vasiliki; Karagiannaki, Ioanna

Hippokratio GH, Thessaloniki, Child and Adolescent Psychiatric Department, Greece

Objective: During the last two decades, major progress in the survival of premature infants has been well documented. Although advances in neonatology have increased the survival rates of premature babies, the evolution of the neurodevelopmental process of these infants has not been well examined. The aim of this study is to investigate the characteristics of premature infants and to detect possible problems in their psychoemotional development (social adaptation, linguistic expression, relations with others).

Material and methods: The sample consists of 40 premature children evaluated through the years 2007–2009. Specific demographic characteristics were collected, such as age, duration of pregnancy, type of labour and duration of hospitalization in the premature babies unit, while social and communication skills were clinically evaluated during examination. The children were between 1,5 to 4 years old, with a mean age of 2.6 years.

Results: 57.5% of the children examined were boys and 42.5% were girls. The average duration of pregnancy was 30 weeks, while the average duration of hospitalization was 2 months. 65% of the children were delivered with a Caesarian section. No specific problems were revealed in 22.5% of these infants. However, 37.5% of the children present with emotional difficulties, such as stress of separation and difficulties in social adaptation and 25% have linguistic problems. Clumsiness in motor development was detected in 12.5% of the infants and inattentiveness and increased distractibility were traced in 2.5%.

Conclusions: Children who survive from prematurity related problems have to face a spectrum of behavioral adaptive and social challenges. This vulnerability requires that specialists cautiously guide families in the management of feeding, playing, communicating, teaching and disciplining their children so as to prevent possible difficulties and to confront problems of these vulnerable babies in an appropriate way.

P14-07

Relationship between maternal attachment during pregnancy and maternal separation anxiety 30 months after childbirth

Wada, Kouhei; Fukuoka, Asuka; Kaneko, Hitoshi; Nomura, Kenji; Hatagaki, Chie; Honjo, Shuji

Nagoya University, Japan

Objectives: This study aimed to investigate the association between maternal attachment during pregnancy and maternal separation anxiety when the child is 30 months old.

Methods: The participants of this study were 57 mothers who had visited a pregnancy examination at the Obstetrics Clinic of Nagoya University Hospital between June 1999 and March 2008. In the third trimester of their pregnancy, the mothers completed a measure of the Maternal-Fetal Attachment Scale (MFAS; Cranley, 1981). The MFAS comprised five subscales: "Roletaking," "Differentiation of Self from Fetus," "Interaction with Fetus," "Attributing Characteristics to the Fetus," and "Giving of Self." Moreover, when their child was 30 months old, the mothers were asked to complete a measure of the Maternal Separation Anxiety Scale (MSAS; Hock et al., 1989). The MSAS had three subscales: "Maternal Separation Anxiety," "Perception of Separation Effects on the Child," and "Employment-related Separation."

Results: "Maternal Separation Anxiety" correlated with "Roletaking," "Interaction with Fetus," and "Giving of Self" ($r = .30$, $p < .05$; $r = .26$, $p < .05$; $r = .30$, $p < .05$, respectively). Further, "Perception of Separation Effects on the Child" was associated with "Differentiation of Self from Fetus" ($r = .32$, $p < .05$).

Conclusion: The results showed that maternal attachment during pregnancy was related to maternal separation anxiety. This suggests that the development of stable mother–fetal attachment is important for the mothers' mental health. Thus, this finding is clinically significant for supporting the development of mother–fetus bonding during pregnancy.

P14-08

Comparison of the quality of mother–infant dyad relationship in terms of alexithymia level of mothers

Yurumez, Esra¹; Uran, Pinar²; Kilic, Birim G.¹; Ugur, Cagatay¹

¹Ankara University School of Medicine, Child and Adolescent Psychiatry, Turkey; ²Ankara University of Medicine, Child and Adolescent Psychiatry, Turkey

The multidisciplinary approach in mother–infant interaction, which is one of the most predictive factors in development of many psychopathologies, is accepted. In recent years alexithymia is a personality trait that places individuals at great risk for several medical and psychiatric disorders. Alexithymia is a term used most commonly to describe people who have difficulties recognizing, processing and regulating emotions. Adult attachment behaviour and alexithymic characteristics were assessed in previous researches. In our research we thought the alexithymia level of mothers could give opinion about the quality of attachment with their own children. We aimed to evaluate relationship between mothers and developmentally normal infants in terms of alexithymia level, clinical implication of depression and anxiety symptoms and marital satisfaction of mothers. The study included 40 children between 2 and 4 years of age and their mothers who applied consecutively to Ankara University School of Medicine, Clinic of Child and Adolescent Psychiatry. Mothers completed Toronto Alexithymia Scale, Beck Depression Inventory, Beck Anxiety Inventory, Marital Satisfaction Scale and Sociodemographic Identification Form. Crowell procedure was applied to mothers and children and quality of their relationships were evaluated according to PIR-GAS based on DC:0-3R. The developmental stage of children were assessed by Ankara Developmental Screening Inventory. The results are discussed by the mean of effects on mother–infant interaction. Pearson correlation was used to compare the total alexithymia scores and PIR-GAS scores. We found that there was a significant negative correlation between mothers' alexithymia scores and quality of mother–infant relationship ($p = 0.032$). This result is important to highlight the role of alexithymia level to assess the interaction of mothers and infants. Higher alexithymia scores of caregivers, most probably affects attachment style in infancy and childhood.

P14-10

Music therapy as a treatment for children under 5 years old—preliminary findings of a systematic review of different approaches

Tuomi, Kirsi

Palvelukeskus Luovat Tuulet, Finland

Music therapy has been used widely with children under school age around the world. This is often because of music's non-verbal nature and its capacity of engaging and capturing the child's interest and attention. Music therapy is an evidence based approach including

large variety of different frameworks, theoretical orientations, methods, age–and client groups. Because of this, defining music therapy and choosing right kind of treatment for particular client can be challenging. The presentation is based on systematic review of literature previously published in electronic databases, cd-roms, journals and books. The purpose is to introduce different music therapy approaches used with children under 5 years of age. The presentation illuminates which target group music therapy has been applied with and what the problems they suffer from are. In addition the therapeutic aims, different methods and techniques are evaluated. Finally, the principal findings of the studies are discussed. The main focus will be on music therapy as a preventive psychiatric support and as a psychiatric treatment.

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P16-01

The comparison of self-question strategies based on computer and traditional methods in spelling efficiency of students of with writing disorder

Baezzat, Fereshteh¹; Sadinam, Mohsen²

¹Mazandaran University, Social and Human Sciences, Islamic Republic of Iran; ²Mazandaran University Babolsar Iran, Islamic Republic of Iran

The research at hand compares the effects of efficacy of self-question strategies based on computer and traditional methods based on paper in spelling efficiency of students with writing disorder. Thirty three students of with spelling disorder were randomly selected from community of students of elementary school through cluster sampling. Then subjects randomly divided into two experimental groups and one control group. After administering of the writing and memory pretests, first experimental group received self-question strategies based on computer through 15 sessions. Second experimental group received traditional methods based on paper. control group, however, did not receive any treatment. post-tests were administered (immediately) while follow up tests were administered (after a period of 4 months). Data was analyzed through analysis of Repeated measures. Research findings indicate that self-question strategies based on computer increase writing efficiency of Students with writing disorder more than of traditional methods based on paper. Based on result.

P16-03

Assessing children and adolescents with learning difficulties: findings from the last 5 years

Emmanouilidis, Anastasios; Kasektzidou, Anatoli; Mina, Styliani; Kyrgia, Athanasia; Termitis, Christos; Karagiannaki, Ioanna

Hippokratio GH, Thessaloniki, Child and Adolescent Psychiatric Department, Greece

Objective: Academic difficulties are one of major and continuously increasing causes for families to address child psychiatric services, due to increased sensitivity and alertness of both parents and teachers. Nowadays, these problems rise to almost 45%, among the reasons for appointment request in our outpatient clinic. This study aims to examine the relation between the variety of requests for learning assessment and the final diagnosis, in relation to demographic data, through the last 5 years.

Methods: The archives of our clinic through the years 2005–2009 were researched for all cases who addressed the unit because of learning problems and specific data were collected including sex, age, the exact initial request, the final diagnosis, the proposed intervention etc.

Results: Our sample consists of 783 children and adolescents and, as expected, 68.8% were boys and 31.2% girls. Their mean age was 10.9 years with a standard deviation of 2.9. 444 were elementary school pupils, while 339 secondary school students. The primary reasons for appointment, as expressed by the parents, were general poor school performance (41.3%), difficulties in written language (24.4%), inattentiveness and hyperactivity in class (15.7%) and evaluation for dyslexia (12.9%). The clinical diagnosis after the evaluation included non-specific learning difficulties (19.1%), specific learning disorder-dyslexia (18.7%), attention deficit hyperactivity disorder (14%), borderline intelligence (7.1%), etc. However, no clinical problem was detected in 23.4%.

Discussion: Despite the fact that academic problems have become, during the last years, the primary reason for evaluation request in a child psychiatric clinic, learning difficulties and disorders are diagnosed in less than half of the cases, implying in this way that, sometimes behind an academic difficulty, there could be hiding a difficulty of a different nature.

P16-04

Psychiatric variables (alcohol and internet use behavior, anxiety, depression) and academic achievement in premedical students in a Korean university

Park, Kichang¹; Kim, Min Hyuk¹; Jun, Hyung Chul²

¹Yonsei Wonju Medical College, Psychiatry; ²Yonsei Wonju Medical College, Medical Education Unit

Background and objectives: Medical education system in Korea consists of 2 years of premedical course and 4 years of medical course. Most of premedical students belong to top 1% in Korea national student aptitude test. However, some students fail to study to get appropriate school record attainment such as poor GPA or failure to pass some subject, in premedical course. Mostly new students of universities in Korea, feel liberation from heavy burden of study, and should adapt to new university culture. This medical school is located in a local city, most of students are living in campus. They are exposed to a lot of stressors. We examined many mental health factors, such as depression, anxiety, alcohol abuse, internet addiction and sleep disturbance. We examined these factors and their school achievement for improving mental health and their better adaptation in schooling.

Method: Subjects are 215 premedical students who are first and second grade. They complete self-reports about demographic data,

Beck Depression Inventory, Beck Hopeless Inventory, State-Trait Anxiety Inventory (STAI), Dysfunctional Impulsive Scale, Buss and Durkee Hostility Inventory (BDHI), Epworth Sleepiness Scale, Alcohol Use Disorder Identification Test (AUDIT), Young's Internet Addiction Scale (YIAS). In addition, we examined subject's GPA.

Result: 1. Students in low GPA (lowest 25%) are higher AUDIT score than high GPA (highest 25%) (6.23–5.22 vs. 11.60–7.12, $P < 0.001$) 2. 32 students (14.8%) are high risk group of internet addiction, they also have high scores on BDI, STAI, ESS. 3. On multiple regression analysis, AUDIT score effects on GPA.

Conclusion: As other research showed, excessive alcohol drinking reduce school achievement. In addition, internet overuse has bad effect on the school achievement indirectly, because they have high scores on anxiety, depression, sleep disturbance. Therefore, we should have concern about internet use behavior in addition to drinking problem.

P16-05

Involvement in bullying among young Norwegian adolescents and their self-reported suicidal ideation over a one year period of time

Undheim, Anne Mari; Sund, Anne Mari

Norwegian University of Science and Technology, Neuroscience, Norway

Background: Bullying and aggressive behavior are serious problems that negatively affect school children's mental health. Suicidal ideation and behavior is increasing in adolescence. Few studies have investigated the relationship between bullying and suicidality in the early adolescent years.

Aims: The aims of this study were to assess the prevalence and possible predictors of suicidal ideation among adolescents being involved in bullying, both being bullied and bullying others, over a 1 year period of time. Differences between genders were explored.

Material and methods: The sample consisted of 2,464 Norwegian young adolescents (50.8% girls) with a mean age of 13.7 at T1, who were reassessed 1 year later. Being bullied was measured by three items concerning teasing, exclusion, and physical assault, in school or on the way to school. A composite scale was constructed from four items from the Youth Self Report (YSR) to measure being aggressive towards others. Suicidal ideation was measured by 5 items from The Mood and Feelings Questionnaire (MFQ). Differences between group means were estimated using t-tests or one-way ANOVA with Bonferroni post-hoc tests. Multiple linear regression was performed to search for predictors of ideation at T1 and from T1 to T2.

Results: 331 adolescents (14%) were involved in bullying at T1, 225 (9.5%) being bullied and 106 (4.5%) being aggressive towards others. Of all the adolescents at T1, 25% reported suicidal ideation at some level at T2, significantly higher among girls than boys ($p < .001$). Adolescents involved in bullying (bullies and victims) had significantly higher levels of suicidal ideation 1 year later than non-involved adolescents. In the multivariate analyses, being bullied, being aggressive towards others and gender, were all significant predictors of suicidal ideation at T1 ($p < .001$), however, only being bullied and gender predicted at T2.

Conclusions: Being bullied and gender predicted suicidal ideation 1 year later.

P16-06**Personality and achievement motivation in pre-adolescent children with and without siblings: a study from India***Stanley, Selwyn¹; D, Monica²*¹University of Plymouth, UK; ²Social Worker, India

Research on the personality of only children has fascinated social scientists for several decades. Popular stereotype holds these children to be selfish, socially inept, dependant on others, anxious and generally mal-adjusted (Polit, 1982, Thompson, 1974). However, an early quantitative review that combined the results of 141 studies found that only children scored significantly better than other groups in achievement motivation and personal adjustment (Polit and Falbo, 1987). Results of Riggio (1999) revealed only a marginal difference between adults with and without siblings in Neuroticism, and no differences in various social skills or overall social competence.

Aims: 1. To study and compare the personality traits of children with and without siblings. 2. To study and to compare the achievement motivation of these two groups of children with regard to academic success, skills, social and vocational dimensions. 3. To study the association between the socio-demographic characteristics of the respondents and the subject dimensions.

Methods: 98 pre-adolescents in the age group of 10–14 years were chosen from a school in Tiruchirapalli, India using a random sampling procedure. 45 of these children were only children with no siblings while the remaining had siblings. The Eysenck Personality Inventory and Achievement Motivation Scale (Shah, 1996) were the instruments administered.

Results: Data analysis reveals that the two groups of children did not show any significant statistical difference in terms of achievement motivation and all its sub-dimensions. However the personality profile shows that more only children showed traits of Introversion, while those with siblings were higher on Extraversion.

Conclusion: The presence or absence of siblings has definite implications for the personality of children but does not in any way impact their achievement motivation.

P17-01**Relation between unintended pregnancy among teenagers and post-partum blues***Aghamohammadi, Azar¹; Rajabi, Abbas²*¹Islamic Azad University, Sari Branch, midwifery group, Islamic Republic of Iran; ²Islamic Azad University, Sari Branch, Islamic Republic of Iran

Background: Unintended pregnancy continue to many countries in the world especially among teenagers.

Aims: To assess the prevalence of post-partum blues in teenage mothers with unintended pregnancy, compared with teenage mothers with planned pregnancy.

Materials and methods: 100 normal primiparous women with age less than 19 were studied and divided two groups who had unintended pregnancy and planned pregnancy. maternity blues assessed in two groups.

Results: There was postpartum blues in women with unwanted pregnancies more than women with planned pregnancies in 3 and 10 days after delivery and this differences are statistically significant.

Conclusion: Unintended pregnancy may be a potential causal factor for maternity postpartum blues in teenagers.

P17-04**Phenomenology of children and adolescents with bipolar disorders in Japan***Denda, Kenzo; Sato, Yuki; Inoue, Takao*

Hokkaido University, Department of Functioning and Disability, Japan

Background: In the past decade, interest in and research on pediatric bipolar disorder has increased substantially. However, few clinical studies of bipolar disorders in children have been conducted in Japan. In this study, we describe clinical presentations and comorbidities of bipolar disorders in childhood and adolescence in Japan and examine their clinical significance and problems.

Methods: Thirty eight children and adolescents (8–17 years old) with bipolar disorders, who had been referred to the Department of Psychiatry at Hokkaido University Hospital and Nirenokai Children's Hospital, were studied. All had bipolar disorders as diagnosed by DSM-IV criteria.

Results: Of the 38 patients (21 boys, 17 girls, mean \pm SD age, 13.4 ± 3.2 years), 12 (31.6%) had bipolar I disorder (BP-I), 4 (10.5%) bipolar II disorder (BP-II), and 22 (57.9%) bipolar disorder not otherwise specified (BP-NOS). Youth with BP-NOS were not diagnosed as BP-I because they did not meet the DSM-IV duration and symptom criteria for manic or mixed episode. Subjects with BP-NOS could be classified into two types of (1) children presenting with very rapid mood cycles and elevated mood or grandiosity (BP-NOS-1, $n = 13$), and (2) children presenting with nonepisodic severe irritability (BP-NOS-2, $n = 9$). There were no significant differences among the BP-I and BP-NOS groups in age of onset, duration of illness and lifetime rates of comorbid diagnoses. But in family history, BP-NOS-2 youth differed from BP-I youth and BP-NOS-1 youth in the likelihood that they had a parent with bipolar disorders (BP-I: 33%, BP-NOS-1: 31%, BP-NOS-2: 11%). Elevated mood was present in 92% of subjects with BP-I, 85% of subjects with BP-NOS-1, and 67% of subjects with BP-NOS-2.

Conclusions: Youth with BP-II and BP-NOS-1 have a phenotype that is on a continuum with that of youth with BP-I. But youth with BP-NOS-2 may have a phenotype that is not on a continuum with that of youth with BP-I.

P17-05**Management of acute mania in adolescents***Dineen, Peter; Malizia, Andrea*

University of Bristol, Psychopharmacology Unit, UK

This is a literature review of all available evidence for pharmacotherapy for manic episodes in adolescents. The focus of this poster is on the evidence from randomised controlled trials only for acute episodes of mania. Studies were those published or presented in peer-reviewed journals cited on Pubmed since the year 1980. Four main atypicals were found to have some randomised controlled evidence: olanzapine, aripiprazole, quetiapine and risperidone. There is a very limited evidence base for treatment as the numbers of studies presented in the poster in graphical form are few; clinical guidelines are lacking, with clinical management recommendations coming being

extrapolated from adult studies. We recommend further trials of newer antipsychotics in adolescent age groups.

P17-06

Thyroid alterations in child and adolescent psychiatric psychopathology: relation with clusters of diagnosis

Gariup, Maria¹; Morer, Astrid²; Grande, Iria²; Lazaro, Luisa²; Castro, Josefina²

¹Hospital Clínico, Child and Adolescent Psychiatry, Spain; ²Hospital Clínico, Spain

Background: In adults, thyroid function abnormalities have been associated with eating disorders, affective and anxiety disorders. Depression often co-exists with autoimmune subclinical thyroiditis, suggesting that it may cause alterations in the immune system, or be an autoimmune disorder itself. The correction of thyroid abnormalities does not always result in the resolution of psychiatric symptoms. Studies on children and adolescents are missing.

Methods: Clinical charts were revised in 331 patients, subsequently hospitalized in a children-adolescent psychiatry inpatient unit. Thyroid function was assessed by serum T3, free T4 (FT4), and thyroid-stimulating hormone (TSH) levels, and alterations were related to psychiatric diagnosis. Statistical analysis was performed with SPSS 18 for windows.

Results: Overall, 21% of patients had thyroid alterations at admission, but the prevalence of thyroid abnormalities was unevenly distributed among the different diagnosis.

Patients with eating disorders had a higher prevalence of thyroid abnormalities ($p < 0.0001$) compared to all other patients grouped together. Over 90% of alterations consisted in a reduction in T3.

Among the rest of patients, the prevalence of thyroid abnormalities was significantly higher ($p = 0.012$) in the cluster of patients with a DSM-IV diagnosis of affective and anxiety disorders, compared to the others. The “affective and anxiety” cluster included depression, bipolar disorder, adjustment disorder, anxiety, and PTSD. The most common thyroid alteration was an elevation of TSH with normal FT4.

Conclusions: Besides confirming T3 alterations in alimentary patients, these data suggest a possible association of hypothyroidism with affective and anxiety disorders. Other diagnostic groups, such as ADHD and conduct disorders, appear relatively free from thyroidal disturbances. Thyroid alterations could be primary or secondary to the psychiatric disease, or a common autoimmune mechanism may underlie both disorders.

P17-07

Childhood depression, academic and social competence and behavioral problems

Grigoriadou, Alik

Hellenic Centre for Mental Health and Research, Athens, Greece, Adolescence Unit, Greece

Depressive symptoms in school-age children affect their academic achievement and social functioning and are related to behavioral problems. The aims of the present study were: (a) to identify incidence of depression in a general population sample of school-age children in Greece, (b) to investigate the relationship of depressive

symptoms to epidemiological and demographic factors, (c) to evaluate the influence of childhood depression in academic performance, school adjustment and social competence and (d) to reveal associations between childhood depression, behavioral problems and specific clinical syndromes. Subjects were 1,009 children (477 boys and 532 girls), 9–12 years old. The following psychometric instruments were used: (1) The Children’s Depression Inventory, C.D.I. (M. Kovacs, 1992). (2) The Teacher’s Report Form, T.R.F. (T. Achenbach, 1991b). (3) The Child Behavior Checklist, C.B.C.L. (T. Achenbach, 1991).

Results: The percentage of depressed children in our sample was 7%. Depression was significantly and negatively correlated with academic performance, adaptive functioning and social competence, while it was significantly and positively correlated with problem behavior and with the specific clinical CBCL syndromes. Interestingly, only 11.3% of the self-rated depressed children were rated as depressed by their parents also. Our results clearly suggest that, although childhood depression leads to psychosocial dysfunction in vital areas, as academic performance, social adjustment and problem behavior, it is not easily recognizable from the child’s environment as a clinical mood disorder. The poor psychosocial outcome of childhood depression (Birmaher et al, 1998), underscores the necessity of its early detection and should be an important motive for further research efforts.

P17-08

Clinical characteristics and diagnostic stability of bipolar disorder in children and adolescents

Habibi, Nastaran; Shahrivar, Zahra; Mahmoodi Gharai, Javad

Tehran University of Medical sciences, Islamic Republic of Iran

Objectives: The aim of this study was to evaluate the clinical characteristics and diagnostic stability of children and adolescents with bipolar disorder.

Method: In this prospective study, 257 subjects with bipolar disorder who were consecutively admitted to Roozbeh hospital were enrolled. Demographic characteristics, diagnosis, treatment, comorbid disorders and mood and psychotic symptoms were extracted from the admission file and the patient’s information questionnaire which had been filled in admission time. In the further assessment, diagnostic evaluation was done using the schedule for affective disorders and schizophrenia for school-age children—present and lifetime version (K-SADS-PL) for the patients under 18 and the schedule for affective disorders and schizophrenia (SADS) for the patients older than 18 and psychiatric clinical interview. Severity of symptoms in acute phase of mood disorder was evaluated by young mania rating scale (Y-MRS) in manic phase and Beck Depression Inventory (BDI for patients older than 16 years) or Children Depression Inventory (CDI for the patients under 16 years) in depressive phase. Also, current and past level of functioning were evaluated by the global assessment of functioning (GAF) scale for patients older than 18 years and the Child Global Assessment Scale (CGAS) for the patients under 18 years.

Results: The most common symptom, irritability, was accompanied by elated mood in most cases. 73.2% of patients had at least one comorbid disorder and the most common comorbid disorder was Attention Deficit Hyperactivity Disorder (44.2%). Diagnostic stability in all periods of illness was higher than 80%.

Conclusion: This study supports the high diagnostic stability of bipolar disorder in children and adolescents.

P17-09**Pathology of attractions in the structure of endogenous depressive and maniacal conditions in child age***Iovchuk, Nina¹; Severnyy, Anatoly²*

¹Moscow City Psychological-Pedagogical University, Russian Federation; ²Mental Health Research Center, Russian Academy of Medical Sciences, Russian Federation

As show the clinical-statistical data, from a debut of disease till the moment correct qualification of depressions and hypomanias in childhood passes from 6 months till 7 years. Along with somatization in endogenous affective phases quite often on the foreground stick out pathology of attractions causing are at the bottom of the first reference to the psychiatrist act. The work purpose consists in revealing of features of the pathological attractions arising in structure of depressive and maniacal phases at cyclothymia and schizophrenia.

Methods: Clinical–psychopathological.

Results: At 72 patients at the age from 3 till 16 years on the foreground acted the deformed attractions to food (bulimia, anorexia, appetite perversion), thefts, runaways, vagrancy, arsons, sadistic or masochistic trends, yearning to purchases, an inclination to the special conditions of consciousness caused by means of squeezing of carotids, etc., the sexual or homosexual inclinations, the raised bent for to smoking, alcohol, narcotic and toxic substances. Thus disorders acted at a number of children only in maniacal, and at others (slightly less often)-in depressive phases and were reduced simultaneously with corresponding affective symptomatology or affect inversion. Incorrect estimation of pathological conditions, undetection of affective and especially depressive disorders caused wrongful correctional-pedagogical tactics and the inadequate treatment worsening conditions a patients. The analysis of a clinical material has allowed to allocate a number of the signs promoting definition of attractions, soldered with affective disturbances: a temporality of pathological attractions, seasonal prevalence of their occurrence, daily fluctuations of their intensity, characteristic for maniacal or a depressive states vegetative disorders, hereditary load to affective or schizo-affective psychoses, and also existence of affective depressive or bipolar phases before occurrence pathological behavior.

P17-10**Depression and grief in adolescence after war trauma survived in early childhood-case presentation***Kravic, Nermina; Selimbasic, Zihnet; Hasanovic, Mevludin; Pajevic, Izet*

University Clinical Center Tuzla, Psychiatry, Bosnia and Herzegovina

Objective: War trauma leave a lot of unmourned losses and unprocessed grief in souls of all generations of population involved in disaster.

Case presentation: A girl age 18 was treated of major depression (Child Depression Inventory: 41), with symptoms of withdrawing, somatic complains, miserable feelings, suicidal ruminations. She and her mother were chased out from their home when she was 6 months old, running between the front lines under gun fire, lived under unconditional circumstances as refugees during almost 4 years of war. Her father succeeded to save his life too, but her grandfathers have been missed by the war and they are probably killed but their bodies are not found yet. After the war she has got brother and sister,

their grandmothers were living with them too. During her childhood her mother and grandmothers were often cry for their love ones. Her brother, as mail heir has a privileged place for all family members. It makes her very unsatisfied, angry, insecure in school, with friends, but also provoke guilty feelings. Although she has lived for almost her all life in Tuzla, she is feeling as a refugee. All family has had a number of unprocessed traumas and losses and the wail of silence and mixed emotions were pulled over it.

Conclusion: War trauma and losses transference through numbed communication between family members and influence even those who were very young in that time or born after it. Work through traumatic experience and grief of family members in group and individual psychotherapy helped her to better understand her emotional reactions, to behave herself with a more self esteem, build up her personality as young student and improve communication with family members.

P17-11**Line item analysis in child and adolescent patients with bipolar I disorder treated with Aripiprazole in an acute study (31-03-240)***Loze, Jean-Yves¹; Forbes, Robert Andrew²; Zhao, Joan²; Chen, Chien-Feng²; Carson, William²; Iwamoto, Tarō²; Mankosky, Ray³; Mathew, Suja⁴*

¹Otsuka Pharmaceutical Europe Ltd., France; ²Otsuka Pharmaceutical Development and Commercialization, Inc., USA; ³Bristol Myers Squibb Co., USA; ⁴Otsuka America Pharmaceutical, Inc., USA

Objectives: Evaluate the efficacy of aripiprazole for the treatment of discrete symptoms of mania in children and adolescent patients (aged 10–17 years) with bipolar I disorder.

Methods: Post-hoc analysis of data from a 4-week, double-blind, placebo controlled, randomized clinical trial comparing two fixed doses of aripiprazole (10 or 30 mg, N = 197) with placebo (N = 99) for the treatment of acute manic or mixed episodes, with or without psychotic features, using the 11 items of Young Mania Rating Scale (YMRS).

Results: Subjects receiving aripiprazole had a statistically significant greater reduction than placebo (all p < 0.05 or less) on the YMRS Total Score, and on the individual items: elevated mood, increased motor activity/energy, need for sleep, irritability, speech, language/thought disorder, abnormal thought content, and disruptive/aggressive behavior. Small improvements compared with placebo were noted in the items: appearance, insight, and sexual interest, although these were not statistically significant.

Conclusions: Aripiprazole is effective in ameliorating many of the common and most troublesome symptoms experienced by child and adolescent patients with bipolar I disorder experiencing acute manic or mixed episodes, with or without psychotic features.

P17-12**Characteristics of adolescent with bipolar disorder as seen through of Rorschach test***Muramatsu, Tomoko¹; Mtsuo, Chitoshi²; Munesue, Toshio³*

¹Osaka University, United Graduate School of Child Development, Japan; ²Kiuchi Women's Clinic, Japan; ³Kanazawa University, Research Center for Child Development, Japan

Background: Although bipolar disorder is considered rare in children and adolescents, it is becoming a more frequent diagnosis in youth. However, the lack of systematic studies of this conditions in young patients means we must extrapolate from research in adults. Diagnosis of bipolar disorder is more difficult in children and adolescents than in adults. The Rorschach (inkblot) test can be regarded as neurocognitive measure because it evaluates responses to meaningless stimuli, which may represent any neural basis of thought disorder. Thought disorder of bipolar patients in adolescence and young adulthood has rarely been investigated from viewpoint of unexpected measures, such as the Rorschach (inkblot) test. We suggest that Rorschach variables may be useful in diagnosis of Bipolar disorder.

Objective: To investigate the characteristics of thought disorder in adolescents and young adults with euthymic bipolar disorder using Rorschach (inkblot) test.

Method: Twenty-two subjects (mean age [SD] 20.8 [3.1] years; 19 females, 3 males) with euthymic bipolar disorder and age- and sex-matched healthy controls (20.7 [2.1] years; 18 females, 4 males) were examined using Rorschach (inkblot) tests. No healthy subjects had any psychiatric disorders using Structured Clinical Interviews of DSM-IV-TR or any psychiatric guidance in first-degree relatives.

Results: The results are currently being analyzed.

P17-13

Adolescent gender differences in associations between temperament, coping, and depression

Murillo, Verónica¹; Jané, Maria Claustré²; Viñas, Ferran³; González, Mónica³

¹University Autònoma of Barcelona, Department of Clinical and Health Psychology, Spain; ²University Autònoma of Barcelona, Department of Clinical and Health Psychology, Spain; ³University of Girona, Department of Psychology, Spain

The relationships between temperament, coping, depressive symptoms (DS) and major depression (MD) in a community sample of 301 adolescents (156 boys and 145 girls), aged 12 to 15 years were investigated, focusing on gender differences. All the adolescents completed tree questionnaires: the Early Adolescent Temperament Questionnaire-Revised, the Adolescent Coping Scales and The Youth's Inventory-4. Only of participants whit depressive symptoms completed The Mini-International Neuropsychiatric Interview-Kid. Results indicated that low Level of activity and Wishful thinking were predictors of SD in girls, and low levels of Seek professional help, Physical recreation and low levels of Attentional control in boys. Solely temperamental characteristics of Fear in boys and low level of Inhibitory control in girls seemed to be predictors of MD. Furthermore, a different model was found according to gender when attempting to explain DS and MD. Findings suggest that results of depressive symptoms may not readily generalize to major depressive disorder.

P17-14

Trichotillomania and bipolar disorder in a 6-year old girl

Jimenez Fernandez, Sara¹; Olza Fernandez, Ibone²; Palanca Maresca, Inmaculada³; Cazorla Calleja, Rosario²

¹Hospital Puerta de Hierro Majadahonda, Psiquiatria, Spain; ²Hospital Puerta de Hierro Majadahonda, Spain; ³Hospital Universitario Puerta de Hierro Majadahonda, Spain

A 6-year-old girl was referred to our child psychiatry outpatient clinic by the Paediatric Neurology Unit with a diagnosis of ADHD and trichotillomania. When we first attended her as a patient, she had neither eyebrows nor eyelashes. The clinical picture was of irritability, frequent tantrums, and aggressive behaviour. She was also sad and had depressive thoughts such as “I am ugly and silly”, “my mother is mean” or “nobody loves me”. During the following year she presented several brief episodes of intense mood changes, which typically started with night-time onset trichotillomania. During one of the episodes she showed manic symptoms while attending our clinic such as grandiosity (“I am the owner of my house” “We have 8 bathrooms”), elated mood (she would try to make everybody laugh in the classroom and be very talkative), dysphoria, bizarre behaviour (trying to wear summer clothes in the middle of the winter, painting her entire body with markers), restlessness, diminished concentration, a decreased need for sleep and food refusal. After the episodes, symptoms completely disappeared and she would return to normal behaviour, where she was a quiet, kind, attentive, reasonable and cooperative little girl. In the periods when she seemed more depressed she would accuse her teacher of spanking her (which was proven not to be true) and she would have several different complaints about her relatives not loving her and her being ugly. During different episodes she was repeatedly obsessed about being rich and about her brother being obese. She would also wrap toys and give them away as presents for other people. All complaints would disappear once the episodes were over. A diagnosis of paediatric bipolar disorder was made after the first months of clinical follow-up. A MRI showed an image of brain white matter hyper intensities in T2.

P17-15

Phenomenology of hypomania in adolescents. Findings from a community population

Päären, Aivar¹; von Knorring, Anne-Liis²; Olsson, Gunilla²; Jonsson, Ulf³; Bohman, Hanne⁴; von Knorring, Lars³

¹Department of Neuroscience, Child and Adolescent Psychiatry, Uppsala University, Sweden, Department of Neuroscience, Sweden; ²Department of Neuroscience, Child and Adolescent Psychiatry, Uppsala University, Sweden, Sweden; ³Department of Neuroscience, Psychiatry, Uppsala University, Sweden, Sweden; ⁴Department of Neuroscience, Child and Adolescent Psychiatry, Uppsala University, Sweden

Objective: To describe the bipolar spectrum disorder (hypomania and depressive symptoms) and comorbidity during child and adolescence and compare to unipolar depression.

Method: A population based cohort of adolescents (N = 2,465), was screened for the presence of depressive symptoms and diagnosed according to a structured interview DICA-III-R. The 90 cases of a past or current hypomanic episode was determined by specific criteria that were similar but not identical to DSM-IV criteria, and could be divided into 3 different groups (full-syndrome M4, sub-syndrome M3 and S) and compared with each other, major depression (n = 138) and controls (n = 237).

Results: Grandiosity, elevated mood and increased activity were most common mania symptoms. Full-syndrome hypomania M4 and sub-syndrome hypomania M3 presented no statistical differences. Group S differs statistically in decreased need for sleep, pressured speech, racing thoughts, and distractibility (p < 0.001).

Girls had more distractibility symptoms than boys. During depressive episode M4 group showed more anhedonia ($p < 0.01$) and dysphoria ($p < 0.05$) symptoms compared to S. Girls compared to boys had low mood ($p < 0.05$) and dysphoria ($p < 0.001$) symptoms. All hypomania groups as well unipolar depression presented same proportion of suicidal ideation and behaviour risk. Suicide ideation was more common in girls than boys ($p < 0.05$). M4 presented the highest amount of lifetime comorbidity (2.3; SD 1.9) compared to other groups. Girls had more anxiety disorders than boys ($p < 0.05$) and boys had more behaviour problems ($p < 0.05$).

Conclusion: The results support a dimensional approach to the description of bipolar disorders. The subjects with sub-syndrome spectrum differ from those with full-syndrome, primary on some phenomenology, but not core symptoms of mania and comorbid disorders. Youth with sub-syndrome hypomania M3 were similar to full-syndrome on many factors. As we expected time criteria was less important than the symptom criteria.

P17-16

Clinical characteristics and diagnostic stability of bipolar disorder in children and adolescents

Shahrivar, Zahra¹; Habibi, Nastaran¹; Mahmoodi Gharai, Javad¹; Sharifi, Vandad²; Tabatabaie, Maryam²; Zarrabi, Mojgan²

¹Tehran University of Medical Sciences, Child and Adolescent Psychiatry, Islamic Republic of Iran; ²Tehran University of Medical Sciences, Psychiatry, Islamic Republic of Iran

Objectives: The aim of this study was to evaluate the clinical characteristics and diagnostic stability of children and adolescents with bipolar disorder.

Method: In this prospective study, 257 subjects with bipolar disorder who were consecutively admitted to Roozbeh hospital were enrolled. Demographic characteristics, diagnosis, treatment, comorbid disorders and mood and psychotic symptoms were extracted from the admission file and the patient's information questionnaire which had been filled in admission time. In the further assessment, diagnostic evaluation was done using the schedule for affective disorders and schizophrenia for school-age children—present and lifetime version (K-SADS-PL) for the patients under 18 and the schedule for affective disorders and schizophrenia (SADS) for the patients older than 18 and psychiatric clinical interview. Severity of symptoms in acute phase of mood disorder was evaluated by young mania rating scale (Y-MRS) in manic phase and Beck Depression Inventory (BDI) for patients older than 16 years) or Children Depression Inventory (CDI for the patients under 16 years) in depressive phase. Also, current and past level of functioning were evaluated by the global assessment of functioning (GAF) scale for patients older than 18 years and the Child Global Assessment Scale (CGAS) for the patients under 18 years.

Results: The most common symptom, irritability, was accompanied by elated mood in most cases. 73.2% of patients had at least one comorbid disorder and the most common comorbid disorder was Attention Deficit Hyperactivity Disorder (44.2%). Diagnostic stability in all periods of illness was higher than 80%.

Conclusion: This study supports the high diagnostic stability of bipolar disorder in children and adolescents.

Keywords: Bipolar disorder, child and adolescent, diagnostic stability, clinical characteristics.

P17-17

Children and adolescents with emotional difficulties referring to a psychiatric clinic

Tsamadou, Eftychia; Emmanouilidis, Anastasios; Kasektzidou, Anatoli; Mina, Styliani; Karagiannaki, Ioanna

Hippokratio GH, Thessaloniki, Child and Adolescent Psychiatric Department, Greece

Objective: Emotional difficulties such as depression, dysthymia, anhedonia, social isolation, suicide attempts, low self esteem are common reasons for appointment request in a psychiatric department for children and adolescents. Emotional distress often appears in children as poor school performance, isolation from friends and family, sometimes aggressive behavior or acting out with suicide attempt. These symptoms worry parents who address specialists for help. The aim of this study is to examine demographic characteristics of these children and adolescents and to present the cooperation procedures with the mental health services.

Material and methods: In 2009, 25 children and adolescents with an emotional problem addressed our outpatient clinic. We examined characteristics such as age, sex, appointment petition, final diagnosis and course of collaboration.

Results: 71.4% of the assessed children were girls and 28.6% boys. Their average age was 12.2 years. In 23.8% the primary expressed problem was low self esteem, 19% complain of lack of friends and social isolation and 23.8% refer to low self esteem that affects daily life and social adaptation in addition to psychosomatic problems (headache, difficulties in urination, loss of hair etc). 9.5% have committed a suicide attempt. After evaluation the final diagnosis was depression in 66.6% of the patients, dysthymia in 9.5% and in 9.5% no diagnosis was posed because of the premature termination of cooperation with the clinic.

Conclusions: Early recognition and intervention for children and adolescents with emotional difficulties can improve the therapeutical outcome and also act protectively for this sensitive group against future reappearance of such problems. The mental health specialist should be alert so as to detect possible underlying psychopathology behind the unexpressed petition and the somatic symptom.

P17-18

Depressive spectrum disorders in 7–9-year-old children from The Danish National Birth Cohort—a pilot study

Wesselhoeft, Rikke Thaarup¹; Mors, Ole²; Heiervang, Einar³; Bilenberg, Niels¹

¹University of Southern Denmark, Child and Adolescent Psychiatric Dept. Odense, Denmark; ²University of Aarhus, Center of Psychiatric Research, Risskov, Denmark; ³University of Oslo, Child and Adolescent Psychiatry Unit, Norway

Background: Major Depressive Disorder (MDD) is a disabling disorder also among youths. Studies have shown that adolescents with Minor Depressive Disorder are as impaired and have the same future mental health risks as adolescents with MDD. There is a need for studies unfolding the diversity of Depressive Spectrum Disorders (DSD) in children.

Objectives: The aim is to identify early environmental risk- and resilience factors for children with DSD. Furthermore the established groups will be used for future follow up.

Methods: The Danish National Birth Cohort (DNBC) included 100,000 pregnant women in the years 1996–2002. In the 7-year

follow up survey, the mental health questionnaire *Strengths and Difficulties Questionnaire* (SDQ) was included. From the SDQ results of children born in 2001–2003 ($N \sim 24,000$), screen-positive children are identified. Their mothers and the mothers of a screen-negative group are invited to complete the online diagnostic interview *Development and Well-being Assessment* (DAWBA). The DAWBA diagnoses are used to select DSD groups, an anxious group and a control group. A pilot study ($N = 499$), with the purpose to clarify the optimal SDQ selection criteria and estimate the prevalence of DSD in the cohort, was recently completed.

Results: Response rate was 71%. The optimal SDQ selection criteria for MDD are: $\geq 90^{\text{th}}$ percentile for combined emotional and total score. Further results from the pilot study will be presented.

Conclusion: Prospective studies of the course of childhood Depressive Spectrum Disorders are necessary. This study follows various groups of children with DSD, and eventually investigates the genetic risk factors and gene–environment interaction.

P17-19

Lifetime psychopathology amongst the offspring of bipolar I parents

Zappitelli, Marcelo C.¹; Bordin, Isabel A.¹; Soares, Jair C.²

¹Universidade Federal de São Paulo, Brazil; ²University of Texas Health Science Center at Houston, Houston TX, USA, USA

Background: Recent studies demonstrate high rates of psychopathology in the offspring of parents with bipolar disorder.

Objective: The aim of this study was to identify psychiatric diagnoses in a sample of children of bipolar parents.

Method: This case series comprised 35 children and adolescents aged 6 to 17 years, mean age 12.5 ± 2.9 years (20 males/15 females) with at least one parent with bipolar disorder type I. Subjects were assessed using the Schedule for Affective Disorders and Schizophrenia for School-age children—Present and Lifetime version (K-SADS-PL). Psychiatric family history and demographics were also investigated.

Results: Of the offspring studied, 71.4% had a lifetime diagnosis of at least one psychiatric disorder (28.6% with a mood disorder, 40.0% with a disruptive behavior disorder and 20.0% with an anxiety disorder). Pure mood disorder (11.4%) was less frequent than mood disorders comorbid with attention deficit hyperactive disorder (17.1%). Presence of psychopathology was commonly reported in second-degree relatives of bipolar disorder offspring children (71.4%).

Conclusions: Our results support previous findings of increased risk for developing psychopathology, predominantly mood and disruptive disorders, in bipolar offspring. Prospective studies in larger samples are needed to confirm and expand these results.

P18-01

The impact of maternal attachment style and family dysfunctioning in children with Somatoform disorder

Ayaz, Ayse Burcu¹; Ayaz, Muhammed²; Fis, Nebe Perdahly³; Kalaça, Sibel⁴; Guler, Ayşegül Selcen⁵

¹Adapazari State Hospital, Child and Adolescent Psychiatry, Turkey; ²Adapazari State Hospital, Child and Adolescent Psychiatry Clinic, Turkey; ³Marmara University Hospital, Department of Child and Adolescent Psychiatry, Turkey; ⁴Marmara University Medical Faculty, Department of Public Health, Turkey; ⁵Cumhuriyet University Medical Faculty, Child and Adolescent Psychiatry Clinic, Turkey

Objective: Somatoform disorders (SFD) in children is a little studied topic, considering the importance of these experiences on children and their families. The etiology for SFD should be understood within a bio-psycho-social framework. Attachment behavior is designed to attain proximity to another person. It is hypothesized that maternal attachment style and the family system was associated with the somatic symptoms of children.

Methods: We studied 3 groups of children. The index group, consisted of 33 children with a diagnosis of SFD. The second group were the best friends of the SFD group ($n = 26$), finally third group is healthy control group ($n = 28$). The mothers were inquired to complete Adult Attachment Scale (1) and Family Assessment Device (FAD) (2) whereas the children and adolescents completed only FAD.

Results: In our study although there was no significant difference between the groups in terms of gender ($p = 0.51$), healthy control group was found to be younger than the other groups ($p = 0.00$). The correlations between the groups and maternal attachment styles were not significant (secure, dismissed and preoccupied; $p = 0.47/0.07/0.36$, respectively). On the other hand, maternal reports indicated that the index and best friend groups scored higher than the control group in roles, affective responsiveness, behavior control, and general functioning subscales ($p = 0.03/0.03/0.04/0.01$, respectively).

Conclusions: Children classified as pediatric somatizers have more difficulties in roles, affective responsiveness, behavior control, and general functioning in their families. Their best friends have similar but less severe problems pointing that children who have somatization symptoms may have friends with similar emotional frameworks.

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P18-02

Body experiences and psychosocial functioning in children and adolescents with juvenile idiopathic arthritis

Bomba, Monica¹; Molinaro, Anna²; Meini, Antonella³; Oggiano, Silvia¹; Cattalini, Marco³; Plebani, Alessandro⁴; Nacinovich, Renata⁵

¹University of Milan Bicocca, Dep. of Child and Adolescent Neuropsychiatry, Italy; ²University of Brescia, 2Unit of Child and Adolescent Neuropsychiatry, Italy; ³University of Brescia, Day Hospital of Rheumatology, Pediatric Clinic, Italy; ⁴University of Brescia, Pediatric Clinic, Italy; ⁵University of Milan Bicocca, Italy

Background: Juvenile idiopathic arthritis (JIA) is the most common chronic rheumatic disease in childhood. Since it is characterized by a chronic course, requiring long term therapy and intense follow-up, JIA can have a significant impact on children's life. Some authors in particular reported that children with JIA have a higher risk of social functioning problems and a higher propensity to develop anxiety, depression and poor self-esteem. AIM To investigate self-image, psychological functioning and quality of life in children and adolescents with Juvenile Idiopathic Arthritis (JIA).

Materials and methods: 39 children with JIA were compared with 80 healthy peers. The Human Figure Drawing (HFD) test was administered; children also completed standardized questionnaires evaluating health-related quality of life (PEDSQLTM4.0 Generic Core

Scales), the presence of anxiety (SAFA-A) and depression (CDI). Parents were asked to complete the Child Behaviour Checklist (CBCL) and the PEDSQL™ 4.0. For each patient with JIA clinical notes were gathered and a global disease assessment (Visual Analog Scale-VAS) was performed. Results Compared to healthy peers, patients with JIA reported a reduction in intellectual maturity on HFD, more depressive traits, greater anxiety and lower health-related quality of life. Among the subjects with JIA, HFD test revealed that adolescents had a greater impairment in all areas investigated. Parents' scores did not differ in the two groups. Furthermore, there was a significant correlation between the physical well-being rated by VAS and the perception of poorer quality of life in patients, mostly in the psychosocial domains.

Conclusion: Children and adolescents with JIA exhibit a delay in the psychological development and emotional difficulties in forming a good self-image; they also have an increased risk of anxiety and depression and a worse quality of life, when compared to healthy subjects. Parents seem to have low understanding of these problems.

P18-03

Self-induced hypo and hyperglycemic episodes by manipulation of external insulin pump in adolescents with type 1 diabetes

Bursztejn, Claude¹; Moreau, François²; Spizzo, Hélène²; Pinget, Michel²; Pasquali, Jean-Louis³; Kessler, Laurence²

¹University Hospital of Strasbourg, Department of Child and Adolescent Psychiatry, France; ²University Hospital of Strasbourg, Department of Diabetology, France; ³University Hospital of Strasbourg, Department of Internal Medicine, France

Difficulties in the metabolic control of diabetes are frequent at adolescence. Adolescents with diabetes are also at increased risk of developing psychiatric disorders, including depression and suicidal attempt. However, insulin pumps appear to improve patients metabolic control and quality of life. We report two cases of self manipulation of external insulin pump in adolescents. Patient 1: in a 13-year-old boy with a 7-year history of type 1 diabetes, an insulin pump was indicated because of poor control with multiple insulin injections. Recurrent hypoglycemic episodes necessitated several hospitalizations. Home assessments revealed that the patient injected himself insulin through the catheter of the external pump. Parents reported later episodes of self-strangulation. Patient 2: a 16-year-old girl had major hyperglycemic episodes and frequent episodes of mild hypoglycemia despite multiple daily injections. Insulin pump was introduced. During the following year, four hospital admissions occurred for ketotic decompensation or major prolonged hyperglycemia. HbA1c remained above 10% despite insulin dose 4.5 U/kg/day). The patient admitted having diluted the insulin in the pump reservoir. In both cases, the insulin pump was used in order to induce hypoglycemic episodes or ketoacidosis and failed to improve the metabolic control of diabetes. Factitious disorders are not exceptional in children and adolescents. In the context of diabetes there are several reports of insulin misuse. Such abuse might be related to previous psychosocial problems. But it could also be related to the psychological impact of the chronic illness. Some adolescents might seek experiences analog to drug abuse. Diabetologists need to be aware of the possibility of self-manipulation of the external insulin pump which may lead to therapeutic errors. Psychosocial evaluation is recommended in adolescents with diabetes particularly when insulin pump therapy is proposed.

P18-04

Psychiatric diagnoses and treatment outcomes in children with neurometabolic disorders: CIPP experience

Colonnelli, Maria Chiara¹; Ahmed, Ruksana²; Santosh, Paramala²

¹Great Ormond Street Hospital for Sick Children, UK; ²Great Ormond Street Hospital, UK

Inborn errors of metabolism (IEM) affecting the central nervous system lead to defects in the synthesis, metabolism, transportation and storage of biochemical compounds, leading to tissue intoxication or energy deficiency in vital organs. Little is known about mental health diagnoses and treatment in IEMs.

Aim: To describe the psychiatric diagnoses and treatment outcomes of children with neurometabolic disorders seen in CIPP.

Methods: Retrospective clinical case note review. Psychiatric diagnoses made through clinical assessment, psychiatric interview and completion of questionnaires (Development and Well-Being Assessment, Profile of Neuropsychiatric Symptoms). The Clinical Global Impression (CGI) Severity and Improvement ratings measured outcome at 6–12 months following the start of medication and at the last review.

Preliminary results: Sixteen children (10 boys, mean age of 13 ± 4 years) with neurometabolic disorders [Sanfilippo (n = 7), Hurler (n = 3), Hunter (n = 3), Osteopetrosis (n = 1), Fucosidosis (n = 1) and Niemann-Pick type C (n = 1)] were identified. They had ICD-10 diagnoses of Autism Spectrum Disorder (n = 11), Hyperkinetic Disorder (n = 10), Oppositional Defiant Disorder (n = 7), Affective Disorder (n = 5), Behaviour Disorder secondary to Organic Brain Disease (n = 2), Post-Traumatic Stress Disorder (n = 1), and Mental Retardation (n = 9). Target symptoms were treated pharmacologically using the Minimum Effective Dosage Strategy (MEDS). At the last follow-up, 11 kids were on monotherapy, 1 on polytherapy and 4 off medication. At 6–12 months post-treatment, behavior symptoms improved in 6 (CGI-I score of 2 or 1), and worsened in 1 (CGI-I score of 5). At the last review (mean 45 ± 25 months post-treatment) 6 patients showed significant improvement.

Conclusion: Preliminary findings suggest that psychopathology in children with IEMs is treatment responsive and the data will contribute to the understanding and treatment of these children, and initiate the development of an evidence base

P18-05

Can the outcome of children with Landau Kleffner syndrome be predicted on Magnetoencephalogram?

Durchman, Elina¹; Paetau, Ritva²; Szymanski, Ludwik³; Munir, Kerim (PI)³

¹Island Hospital, Psychiatry and Behavioral Health, USA; ²Helsinki University Central Hospital, Department of Clinical Neurophysiology, Finland; ³Harvard Medical School, Psychiatry, USA

Background: Acquired epileptic aphasia-Landau-Kleffner syndrome (LKS) is a disabling condition that often leads to permanent receptive language disorder and profound problems of communication in previously well developed 3–8-year old children. Varying degree of autistic spectrum disorder (ASD) features can be seen in LKS

patients, and some children with ASD also experience regression of language and social skills at the age of 2–3 years.

Aim: Can Magnetoencephalogram (MEG) predict the outcome in terms of overall functioning and behavior in LKS.

Methods: The parents of 36 patients with LKS were asked to complete the Child Behavior Checklist Parent (CBCL) form, the Life Time Social Communication Questionnaire (SCQ), and a questionnaire developed by us in a retrospective study. All subjects had undergone a MEG study at the Helsinki University between 1998 and 2010. Epileptic MEG spike foci were classified to unilateral or bilateral sylvian pacemakers or to multi-focal spikes.

Results: Fifteen questionnaires were completed. 72% of the children had total competence T-score of CBCL in the clinical range and 47% of the children had SCQ scores of 12 or above. Seventy-one percent had two or more epileptic pacemakers and 27% had only one pacemaker on MEG. There was no statistically significant correlation between the number of MEG foci and the CBCL or SCQ scores. However, patients with a single pacemaker scored higher on CBCL activities than those with bilateral foci.

Conclusion: Most LKS patients continue to struggle with educational and social issues. Strong correlation was found between low CBCL total competency scores and high SCQ scores. A possible correlation between a single sylvian pacemaker on MEG and high CBCL scores merits further research.

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P18-06

Children and adolescents with thalassaemia major: tracing the psychosocial impact

Emmanouilidis, Anastasios; Tsamadou, Eftychia; Kasektzidou, Anatoli; Mina, Styliani; Karagiannaki, Ioanna

Hippokratio GH, Thessaloniki, Child and Adolescent Psychiatric Department, Greece

Objective: Thalassaemia major has changed from being an acute or fatal disease to a chronic condition, due to advances in the medical management of the disease. Its chronic character and its intensive and demanding treatment presumably place a severe psychosocial burden on the patient, causing emotional distress, low self-esteem and interpersonal difficulties. The objective of this study is to investigate the degree and effects of this burden.

Methods: The sample consisted of 40 patients, aged 7–17 years, treated at the Thalassaemia Unit of Hippokratio GH, Thessaloniki. Two specifically designed questionnaires, as well as the Culture Free Self Esteem Inventory and the Children's Depression Inventory, were administered and completed during transfusion in the above unit. 35 questionnaires were considered valid (19 boys, 16 girls, mean age of 11.6).

Results: General self-esteem was low in only 3% of the patients, with 26% having average and 71% high self-esteem. However, the social self-esteem scale was the only one, compared to the other scales, with a low result in 17% of the patients. In the CDI, the general depression score and the negative mood score were above average in 11 and 14% of the patients respectively. The highest negative score was again at the interpersonal problems scale with 22% of the children above average. It is noted that 76% of the above children and adolescents never talk to their friends about their illness, 54% have not informed their friends about their transfusions and about 45% consider

thalassaemia, sometimes or always, a limiting factor in activities with their peers.

Conclusions: The results of this study do not reveal considerable differences on self esteem and emotional development between patients and general population, except implications of difficulties on the interpersonal and socialization level, though further studies could provide more conclusive data.

P18-07

Internet addiction: is it always as it seems?

Emmanouilidis, Anastasios; Tsamadou, Eftychia; Kasektzidou, Anatoli; Mina, Styliani; Karagiannaki, Ioanna

Hippokratio GH, Thessaloniki, Child and Adolescent Psychiatric Department, Greece

Introduction: Internet has nowadays imposed new means of communication, which alter manners of the past and raise issues concerning its proper use by adolescents. A special outpatient clinic focused on children and adolescents who address our unit with the request of handling excessive internet and computer use, is established in our department since 2008. The clinical evaluation of these requests traced many cases of preexisting family dysfunction that put extra burden on the already vulnerable nature of the adolescent, turning him to other practices which offer satisfaction and isolate him from the unbearable outer reality.

Material: The study includes 36 appointment requests for the special clinic in 2010, all adolescents (34 boys, 2 girls) with a mean age of 14.9 years. In 81% of the families, the parents are married, 13% are divorced and in 6% the father is deceased.

Results: The clinical assessment validated moderate internet use in 42% of the adolescents, heavy internet use in 14%, while 28% could not be evaluated because only the parents came to the appointment. 17% of the assessed teenagers suffered from depression. The evaluation also revealed associated dysfunctions, such as aggravation of school performance (31%), stopping school (17%), intrafamilial conflicts (22%) and aggression (17%).

Discussion: Adolescence is a period of human development characterized by major physical, psychological and social changes. The internet influence on the dynamics of this period has become unquestionable, as is the imposing of new terms in communicating. This change in social interactions could sometimes burden the vulnerable nature of the adolescent by influencing negatively his relations to the reference people in his life (family, friends). However, the adolescent's excessive resort to his electronic world could often mirror an existing dysfunction of the above reference systems and requires a profound investigation of the real causes and not just the symptom.

P18-08

Psychological and psychosocial aspects in the course of inflammatory Bowel disease in children and adolescents

Liakopoulou, Magda¹; Chouliaras, George²; Korlou, Sofia¹; Giannakopoulos, George¹; Hatzara, Vasiliki¹; Margoni, Dafne²; Panagiotou, Ioanna²; Roma, Eleftheria²

¹University of Athens Medical School, Department of Child Psychiatry, Greece; ²University of Athens Medical School, 1st Department of Pediatrics, Greece

Aims: To assess associations of individual and familial psychological and psychosocial factors with the active state of pediatric inflammatory Bowel disease.

Methods: Eighty-five children and adolescents with IBD (28 with ulcerative colitis and 57 with Crohn's disease) were recruited. Forty-three children being in active disease (19 on diagnosis and 24 on relapse; mean age 12.9 ± 2.1 years) and 42 children in remission (mean age = 13.6 ± 2.6 years) and their parents completed self-reported questionnaires measuring child anxiety and depressive symptoms, emotional/behavioral problems, life events during the year prior to relapse, child–parents and child-peers attachment, family functioning as well as parental psychopathology. Differences between groups were examined through parametric and non-parametric tests and the relation between the self-reported symptoms and the probability of being in active state of the disease was assessed by logistic regression analysis.

Results: Children and adolescents in active disease reported significantly more emotional ($p = 0.015$) and anxiety symptoms ($p = 0.017$) whereas their parents reported significantly more life events ($p = 0.005$) and negative life events ($p = 0.048$) for the child during the year prior to diagnosis/relapse compared to children and adolescents in remission of IBD. The parents of children in active state of IBD reported significantly higher levels of psychopathology ($p < 0.001$). In the multivariate logistic regression analysis parental psychopathology (OR = 5.7, 95% CI: 1.6–20.7) and self-reported anxiety symptoms (OR = 1.08, 95% CI: 1.01–1.15) were still significantly associated with the disease state.

Conclusion: The present findings expand our knowledge about the role of psychological and psychosocial factors in the course of pediatric IBD and underlie the importance of therapeutic interventions for both children and parents in need.

P18-09

Characteristics of borderline personality disorder in adolescent suicide attempts

Kato, Koji; Mikami, Katsunaka; Yamada, Keigo; Akama, Fumiaki; Ichimura, Atsushi; Matsumoto, Hideo

Tokai University School of Medicine, Japan

Aims: The diagnosis of borderline personality disorder (BPD) has been one of the risk factors for suicide. Few researches have compared suicide attempters with and without BPD in adolescents. The aim of this study was to investigate the clinical characteristics of adolescent suicide attempts in BPD.

Methods: Seventy-eight adolescent patients under the age of 20 who had attempted suicide and had been hospitalized for inpatient treatment consecutively participated. Psychiatric diagnoses and clinical characteristics were examined between the patients with and without BPD.

Results: Ten of the 78 subjects (12.8%) were diagnosed with BPD. The rate of patients with mood disorders was significantly higher in the BPD group (Fisher's exact test, $P = 0.010$). The number of suicide attempts in the BPD group was greater than that in the non-BPD group ($u = 157.000$, $z = -3.010$, $P = 0.003$).

Conclusions: It is necessary to identify the characteristics of suicide attempts in adolescents with BPD in order to try to prevent recurrent suicide attempts in patients with BPD.

P18-10

Elective mutism: epidemiology, clinical characteristics, outcomes and treatment

Kirillina, Natalia

Institute of Harmonious Development and Adaptation, Russian Federation

This study was aimed to investigate the following objectives: the clinical forms of elective mutism (EM), the psychological and patho-psychological characteristics of children elective mute, the etiology, the epidemiology, the dynamic and the treatment. To reach this goal, the application of different techniques was undertaken. As those were used: ABM-WISC test, clinical, patho-psychological investigation methods. 70 children with elective mutism syndrome aged 3–18 years were tested as a total. EM condition duration was ranged from 3 months to 13 years. Scope of treatment activities included play therapy, behavioral and cognitive therapy, art therapy, family and psychodynamic therapy. Main results can be summarized as follows: All the subjects demonstrated refusal to talk. It was ranged from whisper speech to a total refusal to talk aloud. Research of Eİ prevalence for 20,000 persons including pupils of elementary schools and children of kindergartens of Moscow Central district revealed 39 for the first time revealed patients, that makes 0.2% (1:500). Speech development level has differed significantly: there were only 20% of patients without any speech difficulties. Half of children suffered from phobias (50%). Psychologically children with EM demonstrated sensitivity, anxiety, rigidity, lack of confidence, shyness, touchiness, negativism, puerility, and obsessive traits. The data in respect to catamnesis revealed the tendency to preservation of problems of communications at a part of patients (28%), to a long current (8%) and generalisations of EM with total mutism (8%). The conclusions can be made that the revealed large prevalence in a combination to low detectability and a long-term running with total mutism for any cases testifies to necessity of active revealing of EM patients; the expanding knowledge for children experts and the multimodal approach to treatment.

P18-11

Time trends of children's pain, sleep problems and tiredness. A 16-year population-based study

Luntamo, Terhi¹; Sourander, Andre¹; Santalahti, Päivi¹; Aromaa, Mimma²; Helenius, Hans³

¹University of Turku, Department of Child Psychiatry, Finland;

²Turku City Hospital, Child and Adolescent Health Care Unit,

Finland; ³University of Turku, Department of Biostatistics, Finland

Aim: To study prevalence changes, co-occurrence and potentially related psychosocial variables of eight-year-old children's self-reported pain, sleep problems and tiredness during a 16-year time-period.

Material and methods: All eight-year-old children living in selected school districts in South-Western Finland in 1989 ($n = 1038$), 1999 ($n = 962$) and 2005 ($n = 1030$) served as study samples. Study procedures were similar every sampling year. Children were asked about the frequency of headache, abdominal pain, other pains, tiredness and sleep problems. Information about family structure,

mother's education level and child's psychiatric symptoms were obtained from parents, teachers and children. Chi-square test and cumulative logistic regression analysis were used to determine the changes in the symptom prevalence, co-occurrence of the symptoms and associations between the symptoms and above-mentioned psychosocial variables.

Results: During the 16-year time period girls' frequent headache, abdominal pain, sleep problems and tiredness increased from 14 to 25, from 7 to 16, from 15 to 30 and from 15 to 23%, respectively. Boys' frequent abdominal pain, other pains, sleep problems and tiredness increased from 7 to 14, from 14 to 23, from 22 to 30 and from 13 to 24%, respectively. The increase in the prevalence of boys' headache and girls' other pains did not reach statistical significance. The amount of children having several above-mentioned symptoms simultaneously turned about twofold from 1989 to 2005. All symptoms were associated with each other and child's psychiatric problems. However, psychiatric problems did not explain the found increase of the symptom frequencies.

Conclusion: The prevalence of eight-year-old children's frequent pain symptoms, sleep problems and tiredness remarkably increased from 1989 to 2005. Studies providing information of the reasons and prevention possibilities are warranted.

P18-12

The relation between Covert narcissism and Paranoid symptom: comparison between self-esteem, anger expression and personality traits

Oh, Hye-Ji; Koh, Eun-Kyung; Hwang, Soon-Taeg

Chungbuk National University, Department of psychology

This study assumed paranoid has closer relationships with covert narcissism (CN) than overt narcissism (ON). Then variables such as self-esteem, anger expression, and personality traits were examined to see whether this results show paranoid traits are similar with covert narcissism than overt narcissism. Also, sub-factor of covert narcissism can be significant predictor of paranoid were analyzed. For this purpose, Narcissistic Personality Disorder Scale, Covert Narcissism Scale, State-Trait Anger Expression Inventory-Korean Version, Brandon's Self-esteem Scale, Paranoid Scale, International Personality Item were administered to 492 student. First, Paranoid score of CN is significantly higher than ON and control group. Regression analysis was examined to see which of those 5 sub-factors of covert narcissism can significantly be the predictor for paranoid symptoms. As a result, 'Exploitation/self-centered' and 'irritability/vulnerability' were significant predictor of paranoid feature. Second, CN show lower self-esteem than ON and people with low narcissism. High paranoid group also shows lower self-esteem than its lower group. Third, in the analysis of anger expression, CN have strongest anger-in level among other two groups. However, CN show more anger-out than low narcissism group and did not showed difference between ON. The high paranoia group has lower self esteem than low paranoia group. In addition, the high paranoid group shows very similar pattern to CN group when those variables' each mean score of anger expression aspects were compared. Forth, group differences by 5 personality traits were explored. As a result, CN show highest level in 'Neurotism', but lowest scores in 'Extraversion' and 'Conscientiousness.' The high paranoid group has higher 'neurotism', lower 'Extraversion', 'Agreeableness', and 'Conscientiousness'. Based on those results, like the case of Anger expression, CN group shows similar pattern with High paranoia group.

P18-13

The influence of quality of speech perception on verbal memory in children with developmental dysphasia

Plecevic, Vladan¹; Djokovic, Sanja²

¹Cabinet of defectology and speech-language therapy "Plecevic", Serbia; ²Faculty for special education and rehabilitation, Serbia

Verbal memory depends on the quality of speech perception and development of linguistic structures depends on verbal memory. These facts point to a closed circuit of cause and effect sufficiently well-developed speech and language in children with language disorders. For the smooth progress of speech perception, good condition and functions of all parts of the auditory system is necessary. Damage or dysfunction in any part of the auditory system can lead to disorders of speech perception, which affects the state of verbal memory, from which follows the occurrence of different disorders in verbal communication. The aim of this research is to investigate the impact of quality of speech perception on verbal memory in children with developmental dysphasia. The study included 20 children with developmental dysphasia (experimental group), aged from 5 to 7 years and 30 children with normal speech and language development of the same age (control group). To evaluate the quality of speech perception in children in the experimental and control groups was used the technique of speech audiometry with the use of specially designed word lists (Plecevic, Djokovic, 1997), and for the evaluation of verbal memory was used test to examine immediate and delayed verbal memory (S. Vladislavljević, 1983). By analyzing the results of our research we found that children with developmental dysphasia showed significantly worse results, or worse ability to retain verbal content compared to children with regular speech and language development. Children with developmental dysphasia need a higher intensity of the speech signal in order to properly reproduce presented words compared to children with normal speech and language development. We determined the influence of quality of speech perception on verbal memory in children with developmental dysphasia, enabling the identification of new regularities and correlations of quality of speech perception and verbal memory.

P18-14

Psychopathological symptoms in a sample of patients with long duration fever (FUO) without diagnostic outcome

Riccio, Maria Pia¹; Marino, Maria²; Chiato, Fabrizia³; Caiazzo, Mariangela³; Leone, Giuseppina²; Bravaccio, Carmela³

¹Second University of Study Of Naples, Neuropsychiatry, Italy; ²Second University of Study of Naples, Italy; ³University Federico II of Naples, Pediatrics, Italy

Background: Unknown origin fever (FUO) is a feverish condition (TC > 38°C), continuing at least 8 days, with a silent medical history, clinical objectivity negative, with genesis initially unknown. Commonly causes in children are infections (52.3%), immunological diseases (11.5%) and malignancies (5%). In the fictitious fever condition there is production or intentional simulation of physical or psychological signs or symptoms, whose motivation is to assume the sick role, in absence of external incentives.

Aim: To evaluate possible common features of the psychological profile of patients with FUO in order to identify risk factors for

developing a psychopathological disorder Patients and methods: 9 patients (3 M;6F), average age 10.3 years, with F.U.O., with persistence of fever in the absence of diagnostic and instrumental outcome, came at Unit of Child Neuropsychiatry, University of Naples Federico II, between March 2009 and March 2010. Patients underwent the following evaluations: observation and clinical interview; Test Raven's Progressive Matrices; Children's Depression Inventory-CDI; Scale of Self-Administration for Children and Adolescents-S.A.F.A.; Projective test T.A.T.

Results: S.A.F.A. evidences pathological values in Generalized/Social Anxiety and Somatic Symptoms sub-scales and symptomatic values in Depressed Mood, Anhedonia, Low Self Esteem, Insecurity, Guilt subscales. C.D.I. shows average value of 9.4, symptomatic for depressive aspects. Observation, clinical interviews and projective tests show tendency to closure, "defensive" attitude and coarctation of aggressive impulses.

Conclusions: Psychological and behavioral aspects may play an important role in the characterization of patients with undiagnosed F.U.O. The presence of generalized/social anxiety, accompanied by symptoms of behavioral and ideational inhibition, seem to be symptomatic and psychopathological aspects, which may be frequently associated with cases of F.U.O without a diagnostic outcome.

P18-15

Somatic symptoms, severe mood dysregulation and aggressiveness in preschool children

Serra, Rodrigo; Jané, Maria Claustré; Bonillo, Albert; Ballestrí, Sergi; Serra, Natalia

Universitat Autònoma de Barcelona, Department of Clinic and Health Psychology, Spain

Background: Many researchers have been studied somatic symptoms in school children but not in preschoolers. Somatizations are characterised by the presence of physical symptoms that cannot be better explained by a medical condition. The association with Severe Mood Dysregulation (SMD) is still not well known.

Aim: The aim of this study was to detect the presence of SMD in preschool children; to compute the prevalence of somatic symptoms and how these are associated with psychopathology, SMD and aggressiveness.

Materials and methods: Data were analyzed from a sample of children in preschool education in the city of Barcelona (n = 319). The parents answered questionnaires about the presence of somatic symptoms in the children, school absences and paediatric visits; psychiatric symptomatology in children, presence of SMD symptoms and aggressiveness. The children who displayed frequent somatic complaints (four or more in the previous fortnight) were compared to those who did not present any.

Results: 205 of the 319 children (64.3%) had at least one physical complaint during the 2 weeks prior to the study. Frequent somatic complaints were reported in 100 (31.3%) of the participants. Significant associations were found with anxiety symptomatology, separation anxiety, social phobia, visits to the paediatrician and school absences, but not with aggressiveness or SMD symptoms.

Conclusion: Somatic symptoms are common in children between the ages of 3 to 6 years, but there is no positive association with SMD symptoms.

Keywords: Somatizations, preschoolers, psychopathology, severe mood dysregulation.

Acknowledgment: The research was supported by grant N 070027 of Fondos de Investigación Sanitaria (FIS).

P18-16

The general regularities of dynamics of psycho-vegetative disorders in the childhood

Severnyy, Anatoly

Mental Health Research Center, Russian Academy of Medical Sciences, Russian Federation

Psycho-vegetative disorders are rather extended among children and represent a challenge in respect of interdisciplinary from pediatricians, psychiatrists, psychologists, psychotherapists, and also interactions of specialists with parents of patients.

Methods: psychopathological, psychological-diagnostic.

Results: Within 3 years in general pediatric clinic 159 patients at the age from 3 till 17 years (89 boys, 70 girls), various functional systems suffering by psycho-vegetative frustration (gastrointestinal, cardiovascular, respiratory, skin, etc.) are surveyed. Has been revealed mainly affective (depressive and bipolar) psychopathology, and also organic, hallucinatory, epileptiform and other disorders of various depth (up to subpsychotic), but mainly subclinical level. Parents of patients are surveyed also. Before demonstration actually functional vegetative-somatic pathologies it is the most frequent (at 53 patients) lines of anxiety as the individual characteristic are revealed; at 40 children—schizoid; at 31—hysterical; at 20—cycloid lines. At 15 children it is not revealed distinct features of individuality. Than deviations of individuality before psychosomatic demonstration have been more deeply expressed, displays of manifest vegetative-somatic disorders were especially heavy. The most typical dynamics of psychopathological and vegetative-somatic displays: mild deviations of individuality are replaced by psycho-vegetative clinical picture, then the various psychopathological symptomatology gradually leaves on the foreground during later age periods. Psycho-vegetative disorders more often (on the average in 70% of cases) proceed as phase ones, mainly with seasonal dependence.

Conclusion: The functional psycho-somatic pathology at children can be considered as a stage of dynamics of a psycho-vegetative (psychopathological) diathesis with prevalence vegetative-somatic pathologies at some stages ontogenesis.

P18-17

The relationship between parents-offspring temperament, character and maladjustment problems

Song, Hye-min; Jin, Ha-young; Hwang, Soon-taeg

Chungbuk National University, Department of Psychology

The purpose of this study is to investigate the effect of offspring's temperament and character, parental temperament and character on offspring's maladjustment problems. A total of 323 offspring participated in this study, and their parents were administered JTCI 12–18 (The Junior Temperament and Character Inventory 12–18), TCI-RS (The Temperament and Character Inventory-Revised-Short), and

K-YSR (Korean-Youth Self Report). The results are as follows. First, the maladjustment problems were significantly predicted by the offspring's temperament and character in the results of multiple regression analysis. Internalizing behavior problems were significantly predicted by harm-avoidance (HA), novelty-seeking (NS), self-directedness (SD), self-transcendence (ST). Externalizing behavior problems were significantly predicted by novelty-seeking (NS), harm-avoidance (HA), self-directedness (SD), cooperativeness (C), self-transcendence (ST). Second, the offspring's maladjustment problems were significantly positive correlation with the novelty-seeking (NS), and were significantly positive correlation with the sub-dimensions by C2 (Empathy vs. Social Disinterest), C4 (Compassion vs. Revengefulness). Third, the relationships between offspring's temperament and character, and offspring's maladjustment problems, and the moderating effect of parental temperament and character. Multiple moderating regression analysis showed significant interaction effects between offspring's novelty-seeking (NS) and parental persistence (P), cooperativeness (C), and between offspring's harm-avoidance (HA) and parental-persistence (P), reward-dependence (RD). Finally, we discussed limitation of the study and suggestions for future research.

P18-18 Effects of a chronic condition on emotional life and social adaptation: the case of diabetes

*Tsamadou, Eftychia; Emmanouilidis, Anastasios;
Kasektzidou, Anatoli; Mina, Styliani; Karagiannaki, Ioanna*

Hippokratio GH, Thessaloniki, Child and Adolescent Psychiatric Department, Greece

Introduction: Having to live with a chronic condition like type 1 diabetes, adaptations in every day life of the patient and his family are essential to minimize the potential adverse consequences on long-term health. Type 1 diabetes is usually diagnosed during childhood or adolescence, stages when the child already faces significant challenges due to his developmental process. The diagnosis and the psychosocial effects of a chronic illness could influence his self-esteem, perception of self and relations with others. This study aims to examine these effects.

Material and methods: Our sample consists of 34 diabetic children and adolescents treated at the Child Diabetes clinic of our hospital. They were aged 8–18 years, with an average age of 13. During their visit at the clinic, the patients completed a specially designed questionnaire, as well as the Culture Free Self Esteem Inventory and the Children's Depression Inventory.

Results: The general self-esteem scale was low in only 4.3% of the patients, with 21.3% having average, 47.8% high and 26.6% very high self-esteem, while the social self-esteem scale was low in 13.6%, average in 19.2%, high in 47.1% and very high in 20.1% of the children. In the CDI, 23.5% of the patients had average total score, 55.8% below average and 20.6% above average, while the interpersonal problems scores were 47.1, 23.5 and 29.4%, respectively. The anhedonia score and the negative mood score were above average in 11.7 and 32.2% of the patients, respectively.

Conclusions: The above results indicate that patients adequately cope with the reality of living with diabetes. However, the relatively high negative scores in the interpersonal problems scale and the negative mood scale imply that there is still room for the specialist's intervention to minimize the possible psychosocial impact of this chronic condition.

P18-19 Recurrent abdominal pains in British secondary school children: impairment and associations with psychological factors

Vila, Mar; Kramer, Tami; Garralda, Elena

Academic Unit of Child and Adolescent Psychiatry, Imperial College London, UK

Background: Abdominal pain is the most prominent recurrent physical complain in children and one that often leads to health consultations. In most cases, no defined organic cause can be found. The impairment caused by abdominal pain in young people in the general population has been comparatively little investigated.

Aims: To study the presence and impairment caused by recurrent abdominal pain in a community sample of British children and to investigate the links between impairment and psychosocial variables.

Materials: Proforma on demographic data, abdominal pain, impairment, health status and medical consultations. This was complemented by the MFQ (Moods and Feelings Questionnaire), SDQ (Strengths and Difficulties Questionnaire) and CSI (Children's Somatisation Inventory) questionnaires.

Methods: Cross-sectional study of 1200 British School children aged 11 to 16 years. Statistical analysis was carried out using SPSS v17 for Windows.

Results: 15% (n = 168) of the sample reported abdominal pain at least once a week for the previous 3 months. Impairment due to the tummy aches was reported by 83% of the children. Severe impairment ("a lot") was reported as follows: 89 (15%) noted that the pains interfered with their ability to enjoy themselves, 54 (9%) with doing other activities, 48 (8%) with seeing friends and 36 (6%) with their ability to go to school. Significant impairment was associated with being female, with a higher level of emotional and other physical symptoms and days missed of school and with more health consultations.

Conclusions: Recurrent abdominal pains are present in a substantial minority of British school children and, approximately one in ten report significant impairment. Severe impairment was associated with emotional symptoms. When assessing and treating a young person with impairing abdominal pain, it is crucial to enquire about psychological distress as it might be an important contributor and/or maintaining factor for the pain.

P18-21 The influence of RH incompatibility to speech-language and psychosocial children's development

Buzganovic, Igor¹; Zivkovic, Monika²

¹Institute for experimental phonetics and speech pathology, Serbia;
²Clinical hospital centre Zemun, Neonatology sector, Serbia

Speech and language, as the most compound human's psychophysiological functions, are very susceptible to negative influence of many risks factors that affect the development of CNS, and the consequences to speech and language depend on the time of their onset and the intensity of their influence. RH incompatibility is the most common risk factor of speech and language with children and it considers the presence of antibodies in the blood of Rh negative mother and they can go through placental barrier and connect to fetal erythrocytes and cause their decay and destruction (hemolysis of fetal

erythrocytes). The decay of fetal erythrocytes causes fetal anemia and high increase of bilirubins in fetal blood. Bilirubin from decayed erythrocytes can deposit in different parts of the brain and cause its hard damage. The consequence of the influence of the mentioned pathological factors are shown later—from the period of speaking to preschool and school period showing slow speech-language and psychomotoric development, also including consequences of adopting school skills, behaviour, attention and psychosocial development, too. The aim of this research is to determine the influence of RH incompatibility on speech-language and psychosocial development with children, from 2 to 12 years old. In this research 34 children was tested by verbal memory test, speech development test and semantic test. Also, in this research, the profile of feeling state for each child, for 33 different categories was tested. The results of this research showed that speech-language development of these children was very low for their age and the profile of feeling state had more negative feelings than with children who were born without risk factors.

P18-22

Somatic symptoms in a Spanish child and adolescent school population

Domènech-Llaberia, Edelmira¹; Romero, Kelly¹; Canals, Josefa²; Hernández-Martínez, Carmen²

¹Universitat Autònoma de Barcelona, Clinical and Health Psychology, Spain; ²Universitat Rovira i Virgili, Psychology, Spain

The aim of the study was to assess the prevalence of unexplained recurrent medical symptoms and the level of associated emotional pathology in a Spanish school population (sample 2,558: 1,269 boys and 1,289 girls).

Instruments: A self-report questionnaire devised for the present study inquiring about the presence and frequency of somatic complaints; the Screen for Child Anxiety Related Emotional Disorders (Scared); the Children's Depression Inventory (CDI) and a socio-demographic questionnaire prepared by the authors.

First results: The prevalence of non explained recurrent medical symptoms in the total sample was 23.8% (n = 263). The difference by sex was statistically significant (p < 0.001): boys 20.7% (n = 265) and girls 26.8% (n = 345). The difference by age: the total difference between children and adolescents was statistically significant (p < 0.001): children (8–12 year-olds 17%, n = 262); adolescents (13–16 year olds) 31.7% (n = 344). Notwithstanding, children alone did not show any gender difference in the prevalence. The most prevalent symptom was headache (14.8%, n = 303) followed by stomach-ache (12%, n = 246), fatigue (9.6%; n = 197), dizziness (5.8%, n = 119) and muscle pain (5.5, n = 112). All the symptoms were more prevalent in adolescence. Adolescent girls reported significantly more headache, stomach-ache, fatigue, dizziness and muscle pain than boys. They also presented more symptoms of anxiety and depression.

P18-23

Salivary cortisol level in attention deficit hyperactivity disorder and autism spectrum disorder children (a pilot study)

Omneya, Ibrahim¹; Omar, Manal²; Haggag, Wafaa¹; Abdulmoez, Khalid¹

¹Suez Canal University, Neuropsychiatry Department, EGYPT; ²Ain Shams University, institute of postgraduate childhood studies, Egypt

Objective: There is growing concern about increasing rates of diagnosis of autism and attention-deficit hyperactivity disorder (ADHD). Past series of studies have investigated certain common deficits present in children with attention deficit hyperactivity disorder (ADHD) and autistic disorder.

Subjects and methods: A descriptive cross-sectional study held in Suez Canal University Hospital in Ismailia, participants recruited from attendance of the childhood and adolescent psychiatry clinic. The participants are estimated to consist of 128 children between 6 years and 12 years of age, 44 diagnosed with ASD, 44 ADHD diagnosed children and 44 neurotypical children. 4 children from each group are taken till now. Saliva collected and cortisol levels estimated and compared. A battery of psychological assessments done includes: Stanford-Binet intelligence test; 4th edition, Childhood Behaviour Check List (CBCL). Wisconsin card sorting test (WCST), Conners test and Childhood autistic rating scale (CARS).

Results: Preliminary results revealed no significant changes between cortisol levels, but psychological tests revealed various changes.

P18-24

Negative affectivity, parental mental distress and somatic complaints in a clinic-based sample of children and preadolescents

Zolog, Teodora Cosmina¹; Jané Ballabriga, María Claustra¹; Bonillo Martín, Albert¹; Laredo-García, Andrés¹; Viñas, Ferran²; Mitjavila, Merce¹

¹Universitat Autònoma de Barcelona, Spain; ²Univeritat de Girona, Spain

Parental mental distress and temperamental factors are widely documented to be involved in child psychopathology. The associations between dimensions of negative affectivity in children, maternal mental distress and somatic complaints in their children were assessed. A total of 122 children from the Infant and Adolescent Mental Health Centers (Catalonia), ages 3 to 10 years and their parents participated in this cross-sectional study. Parental questionnaires were used to inquire about somatic symptoms in the child, preschool and school absences, pediatric help-seeking, chronic family health problems, parental mental distress (General Health Questionnaire) and dimensions of negative affectivity in children (The Children's Behavior Questionnaire; The Temperament in Middle Childhood Questionnaire). Through lineal and logistic regression analysis, positive significant association was obtained between discomfort, fatigue in children and health care utilization due to somatic complaints. Also, findings revealed positive significant associations between maternal mental distress, social dysfunction in mothers on one hand and frequency of somatic complaints and headaches in children on the other. There were trends indicating positive associations between maternal depression and pediatric consultations with children suffering from somatic complaints; and negative associations between maternal anxiety and school absences as a consequence of somatic complaints. Implications for theoretical models are discussed in which risk factors could predict the development of somatic complaints in children and which enable to more accurately identify which children are at risk for somatization disorders.

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P19-01 Evaluation of art therapy in child and adolescent psychiatry

*Barth, Gottfried Maria*¹; *Ortmann, Lina*²; *Klosinski, Gunther*²

¹University of Tübingen, Child and Adolescent Psychiatry, Germany; ²University of Tübingen, Germany

Objective: Adolescents are able to express their emotions by painting. To facilitate the assessment of the paintings could bring much benefit for clinical diagnostics and therapy.

Method: We generated a multi-item worksheet to evaluate multiple aspects of adolescent's pictures. We tested the practicability by evaluating 235 pictures of 12 adolescent patients using this worksheet. Subsequently we scored the benefit of the discriminative items in contrasted with intuitive regarding the pictures.

Results: Many of the items were useful to differentiate between patients. There also could be assessed a change of painting style in the course of inpatient therapy. Despite of the small sample of patients we found differences between diagnoses, e.g. psychotic patients expressed less tension at the end of treatment whereas patients with emotional disturbance were able to express more tension by progress of therapy.

Conclusion: A structured evaluation of patient's painting is helpful. Characteristics of patients, changes during treatment and a distinction between different diagnoses can be detected by this worksheet. Patients pictures can show a reduction of affective tension according to treatment but also a development of expressiveness. The use of this worksheet in combination with intuitive evaluation enhances the profit of art therapy in adolescent psychiatry. These results will be demonstrated by selected pictures.

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P19-02 Psychoanalytic group therapy for children

*Behm-Kostiainen, Sirpa*¹; *Junnola-Nyström, Eeva-Liisa*¹; *Maunu-Koskinen, Ulla*¹; *Toivanen, Anitta*²

¹Tampere University Hospital, Department of Child Psychiatry, Finland; ²Terapiahuone Pinokkio, Finland

This treatment was developed in Finland by psychologist, training analyst in child and adolescent group psychotherapy Ritva Kajamaa. It is based on theories by M. Klein, W.R. Bion etc. Psychoanalytic group therapy for children is a suitable treatment method for children suffering from various mental problems. Prior to starting this treatment, the child needs to go through sufficient psychological and psychiatric assessment to ensure it is the right treatment method for him/her. There are 4–6 children in one group and the 45–50 min meetings once a week for 2–3 years. The

children in a group are consistent in age and/or in level of development. There are one or two child group psychotherapists per group. In the group therapy process the parents attend parent's group every 2–3 weeks. Within the clear and safe structure children can freely bring out their problems by playing, drawing and talking. The aim of the therapist (s) is to contemplate, understand and interpret child's emotions and the events in the group as well as the relations and projections between the children and therapists. During the process children live and work on their problems and difficult feelings and learn from each other here and now. An adaptation of this method, psychoanalytical cot group psychotherapy treatment was developed for children with early deprivation, trauma and severe problems in integration. The proportion of interpretation is first small and the children are offered concrete nurturing and care. The children have an opportunity to go through early experiences in a symbolic way, have reconstructive experiences and process traumatic experiences. Based on clinical experience it can be said that the child's ability to understand himself and others increase in a psychoanalytical group therapy. Also the ability to tolerate disappointments and difficult feelings increases and co-operative skills in relations to adults and peer group improve.

P19-03 Efficacy of the treatment program for children with aggressive behaviour (THAV)—an interim analysis

*Goertz-Dorten, Anja*¹; *Doepfner, Manfred*²

¹Christoph Dornier Foundation of Clinical Psychology, Institute for Child Psychotherapy, Univ. Cologne, Germany; ²University of Cologne, Department of Child and Adolescent Psychiatry, Germany

Objectives: The German Treatment Program for Children with Aggressive Behaviour (Therapieprogramm für Kinder mit aggressivem Verhalten, THAV) aims at the therapy of children aged 6–12 years with peer-related aggressive behaviour, which results in a persistent impairment of the relationships to other children. Contrary to other treatment approaches, this intervention aims at the individual treatment of problem maintaining and moderating factors of aggressive behaviour. Depending on the individual problem maintaining factors the treatment aims to modify social cognitive information processing, impulse control, social problem solving, social skills and social interactions.

Methods: The efficacy will be tested in a partial randomized control group design with n = 100 children. N = 60 children will be treated for about half a year with the modules of THAV in weekly sessions. The control group of n = 40 children will receive alternative interventions with group play and techniques to activate resources of the child. These interventions give the children the opportunity to train pro-social interactions. Outcome parameters are aggressive behaviour and comorbid symptoms as well as problem maintaining factors, psychosocial functioning, family burden and treatment satisfaction. Moreover, variables of the treatment process are assessed. Questionnaires, tests and individual problem checklist were used to assess these outcome and process parameters.

Results: The interim analysis is conducted in a sample of n = 40 children who finalized the treatment meanwhile. The results show reductions of aggressive behaviour, comorbid symptoms and problem maintaining factors. Clinical experiences with the treatment will be discussed.

P19-04

Evaluation of effectiveness of problem solving training (PST) for children and their mothers with pervasive developmental disorders

Okuno, Hiroko¹; Yamamoto, Tomoka¹; Tatumi, Aika²; Yoshizaki, Arika²; Mohri, Ikuko³; Taniike, Masako³

¹Osaka University, Molecular Research Center for Children's Mental De, Japan; ²Molecular Research Center for Children's Mental Development, Osaka University, Japan; ³United graduate school of child development, Osaka University, Japan

Introduction Previously, we have reported the effectiveness of modified parent training for mothers of children with pervasive developmental disorders (PDD), arranging into smaller groups, with shorter schedules (PTSS). In Japan, problem solving training (PST) is conducted in the children of the junior high student. but, the effectiveness of PST on children with pervasive developmental disorders (PDD) and those parents remains to be determined.

Method: PST was applied for 7 children with PDD of elementary school age (ages of 9.10–14.8) who were seen at Developmental Clinic of Osaka University, and carried out with small groups of 3–4 children and those of mothers. One course consisted of three sessions. The contents of the sessions included a better understanding of problem solving skills, emotional control skills and coping skills based on cognitive behavior regimens. The effect of PST on mothers was assessed with Confidence Degree Questionnaire for families (CDQ). Those of children were assessed with three scales, i.e., the Child Behavior Checklist (CBCL), Stress Coping Scales (SC-S) (Shimada, Miura, 1998) and Interpersonal Self-Efficacy Scale (S-ES) (Matsuo, Arai, 1998). The assessment was done at two time points, before and immediately after each course of PST.

Results: The effectiveness of 4 subjects has been analyzed so far. There were no significant differences were seen in CDQ and CBCL. The scores of SC-S and S-ES were improved after PST, however, without significance.

Conclusion: These results indicated the effectiveness of PST on children with PDD in terms of the improvement in self-efficacy and stress coping.

P19-05

Psychodynamic psychotherapy use and effectiveness in a child and adolescent mental health clinic

Renata, Nacinovich; Gadda, Stefania; Maserati, Elisa; Broggi, Fiorenza; Bomba, Monica; Neri, Francesca

University of Milan Bicocca, Dep. of Child and Adolescent Neuropsychiatry, Italy

Backgrounds: A long-term psychodynamic psychotherapy (LTPP) is defined as “a therapy that involves careful attention to the therapist-patient interaction, with thoughtfully timed interpretation of transference and resistance embedded in a sophisticated appreciation of the therapist's contribution to the two-person field”. Studies focused on child psychodynamic psychotherapy external validity and generalizability of treatment are needed because of the diffused use of these kind of therapies in mental health services and the importance they might have for clinical practice.

Aim: To study the effectiveness of a long-term psychodynamic psychotherapy (LTPP) for children and adolescents with psychiatric disorder.

Materials and methods: Sixty-six outpatient children (age 4–17), meeting the DSM-IV criteria for psychotic disorder, personality disorder, and depressive disorder, were assigned to either the LTPP experimental treatment or to the ‘usual community cares’. Subjects were measured at baseline and after the end of a one-year treatment, by Schedule for Affective Disorders and Schizophrenia for School-Age Children (K-SADS), Children's Global Assessment Scale (CGAS) and Child Behavior Checklist (CBCL).

Results: Major improvements in the experimental group were found in K-SADS, CGAS and CBCL Competence scale.

Conclusions: LTPP is effective in a naturalistic setting such as a mental health clinic for children and adolescents with psychiatric disorders. The benefits of psychodynamic treatment are represented by a global reduction of the symptoms (particularly manifested in the patients with a diagnosis of personality or depressive disorder) and a general improvement of psycho-social adaptation and relational capacities, together with the low economic impact of a time-limited therapy.

P19-06

Implementation and effectiveness of child psychotherapeutic treatment in conventional clinical care

Ryynänen, Taimi¹; Alen, Markku²; Ebeling, Hanna³

¹University and University Hospital of Oulu, Child Psychiatry, Finland; ²University and University Hospital of Oulu, Institute of Health Sciences, Medical Rehabilitation, Finland; ³Institute of Clinical Medicine, University and University Hospital of Oulu, Child Psychiatry, Finland

Background: It has been estimated that approximately 5–9% of children have obvious mental health problems. Psychotherapy is one of the psychiatric treatments used in clinical care, and sometimes occasional elements may contribute to the choice of treatment. Therefore it is valuable to pay close attention to the factors determining the choice of therapeutic strategy. It is also important to recognize characteristics of patients having best possibilities to benefit of psychotherapeutic treatment.

Aims: The aim of this study is to investigate if there are differences in symptoms, family background and ICD-10 diagnoses between the patients having been in psychotherapy or in other psychosocial treatments and how the patients experienced the treatment afterwards.

Material and methods: In this study we collected data from hospital records of children younger than 16 years with psychotherapy recommendation from the Department of the Child Psychiatry of University Hospital of Oulu in 1996–2005 (n = 120). The control group included patients with same age and gender and was randomised to include other psychosocial outpatient treatments.

Results: Patients treated by psychotherapy had a great variety of symptoms, anxiety, fears, depressive symptoms and behavioural problems being the most common. The first impression is that there were not remarkable differences in symptoms compared to patients in other psychosocial treatments. It also appears that psychotherapy benefitted best the children having anxiety or depression. The data shall still be analysed more closely and the results presented accordingly.

Discussion: For developing psychiatric treatments it is valuable to attain researched knowledge about child psychotherapy carried out in naturalistic treatment settings.

P19-07**Therapeutic alliance in psychodynamic child psychotherapy—patient characteristics related to alliance and concordance between therapist and patient**

*Weitkamp, Katharina*¹; *Daniels, Judith*²; *Rosenthal, Sandra*³; *Wichert, Joana*⁴; *Romer, Georg*¹; *Wiegand-Grefe, Silke*⁵

¹University Medical Centre Hamburg-Eppendorf, Child and Adolescent Psychiatry, Germany; ²Charité Universitaetsmedizin, Berlin, Department of Psychiatry, Germany; ³Department of Child and Adolescent Psychiatry, Psychotherapy and Psychosomatics, University Medical Centre Hamburg-Eppendorf, Germany; ⁴University Medical Centre Hamburg-Eppendorf, Germany; ⁵University Medical Centre Hamburg Eppendorf, Child and Adolescent Psychiatry, Germany

Objectives: The therapeutic alliance is consistently associated with treatment outcome in adults and children alike. However, more research is needed on patient variables predicting alliance. The current study focused on patient characteristics related to the therapeutic alliance as well as interrater-agreement between patient and therapist. The current analyses were part of an ongoing wait-list-controlled field study which aimed to evaluate the efficacy of psychodynamic psychotherapy for children and adolescents with a prospective design.

Methods: 83 therapist and patient pairs in outpatient child psychodynamic therapy in Germany have been included in the study. Patients were aged 11 to 20 years (75% female). Therapists and patients filled out questionnaires at the beginning and the end of treatment, as well as up to 5 points in time during therapy. Therapeutic relationship has been measured with the German *Therapeutic Alliance Scale for Children*. Additionally, data on the child's pathology, level of impairment, personality, family functioning and socio-demographic characteristics were collected.

Results: Patients viewed the therapeutic relationship significantly more positive. Intra-class correlations between patients and therapists were low to moderate. Therapist ratings of therapeutic alliance were influenced by the patient's internalizing pathology, age, and gender. Patients ratings were influenced by age and family functioning.

Conclusions: Both informants reported related but distinct information on their relationship. Therapists seemed to be more critical raters of the alliance than the patients. Ratings of the alliance were associated with child characteristics for both therapist and patient report. Consistent with previous findings that patient social functioning influences alliance, patient reported alliance was connected to family functioning. Important pre-treatment relationships might influence the therapeutic alliance in children and adolescents.

P19-08**From within to outside: handwriting and orphans**

*Akbari, Hamed*¹; *Damali Amiri, Mehdi*²; *Akbari, Firouzeh*¹; *Majzoubi, Safoura*³

¹Islamic Azad University, Hamedan branch, Islamic Republic of Iran; ²Buali Sina University, Hamedan, Islamic Republic of Iran; ³Payame nour, Hamedan, Islamic Republic of Iran

The collective life of orphans has been shifted from financial homogeneity towards a form of isolation due to education. During the evolution of life in orphan house, most of them change their characters towards good or bad, dependent on many factors. Detecting the orphans' characters and challenge to change or modify them can be a risky attempt to drive them towards happiness and advise some programs to let them overcome bad traits or to foster good ones. The researchers have paid attention to orphans' handwriting as a powerful indicator of their present life and future, and compared it with other students' to reveal the overt and covert characteristics. Accordingly, fifty students, aged 10–13, from an orphan house in Hamedan, Iran were chosen. Their teachers were asked to deliver the orphans' assignments so that they could be assessed and analyzed in the detection phase in comparison with 20 ordinary students in the same age range. Based on the differences in the handwritings, two important points were derived: the orphans considered financial issues in writing and suffered a fear of punishment. There were applied some programs to change or modify their attitude towards the life and their writing. After 6 months, their writing became more rational, both in form and content, yet far from ideal. This paper describes the evolution direction along with the outcomes during the second phase.

P19-09**Developing attachment oriented program in Russia: Mellow Parenting-Education for professionals**

*Dovbnya, Svyatoslav*¹; *Puckering, Christine*²; *Morozova, Tatiana*¹

¹Firefly Childrens Network, Mellow Parenting, Russian Federation; ²Mellow Parenting, UK

Background: Vulnerable children in “at-risk” families are often suffer from abuse and neglect and are among the most vulnerable groups of the population in Russia. When social support is not available, local authorities sometimes see removing the child as the only means of protection, though it may lead to greater harm to the child's development. The existing family support system does not provide an adequate solution to the problem. Fundamental improvement of social services for children is currently defined as a priority for the social policy in the Russian Federation and in its many regions. However, Russian professionals (psychologists, social workers, nurses, etc.) lack the knowledge and skills necessary to bridge the gap between policy and practice. British–Russian “Young Children Attachment Project” was developed to introduce the knowledge and skills necessary to bridge that gap.

Method: Mellow Parenting Program was chosen for implementation for several reasons: it is well structured, and the evaluation results are very good. The educational needs of the trainees were studied during focus groups. The results of focus group discussions had shown that the participants were vary in their basic knowledge on attachment and support programs. Extra modules on attachment, risk and protective factors, family assessment were developed by British and Russian experts. MP training pack was translated to Russian and edited. 17 Russian professionals took part in MP training in January 2007. Regular supervisions were provided by British and Russian experts.

Results: After the end of the project another set of focus groups was organized to evaluate the opinion of the trainees. Mellow Parenting groups are now organized in a State Family support Centers in Novgorod and St-Petersburg and approved by the local authorities.

P19-10 Family therapy in the middle of family life

*Laava, Marja*¹; *Keskitalo, Marjo*²; *Kuronen, Kristiina*²; *Ahola, Airi*²; *Ukura, Tarja*²; *Ebeling, Hanna*³

¹Institute of Clinical Medicine, University and University Hospital of Oulu, Child Psychiatry, Finland; ²Institute of Clinical Medicine, University and University Hospital of Oulu, Child Psychiatry, Finland; ³Institute of Clinical Medicine, University and University of Oulu, Child Psychiatry, Finland

Objective: At the beginning of 2010, the Child Psychiatry Day Care Unit of the Oulu University Hospital launched a new initiative, the Therapeutic Family Unit. Using a narrative, solution-focused and resource-oriented approach, the new unit strives to empower parents to care children and handle everyday situations. The aim is to facilitate interaction and strengthen attachment relationships within family.

Methods: Families seeking therapy tend to have problems with social interaction. Moreover, the identified 4–9 year old patients often have multiple diagnoses and have experienced difficult life situations. The agreement is made with the family concerning therapy objectives, working methods and home/day care/or school visits. On average, each family spends 10 days at the Unit. Some activities involve the whole family, others the siblings, and they are complemented by discussions with the parents and individual appointments and play with the child. The therapy group (3–4 members) comprises a multidisciplinary team of experts.

Results: Family interaction has improved. It has become easier for the children to receive care and ask for help. Parents report to have acquired new tools for everyday activities and new ways to be with children. A child who refused to talk at the day care has now started to communicate. The relationship between the child and mother has grown closer, and interaction and atmosphere between divorced, quarrelling parents has improved.

Conclusions: The families have expressed satisfaction and felt that their everyday activities and interaction with children have improved. Children enjoyed making trips and playing together and attending therapeutical sessions, while their parents considered as most useful Therapeutic sessions, discussions, playing together and video-recording shared activities. Being intense and practical, this type of therapy enables therapists to reach a good collaborative relationship with the family members in a fairly short time.

P19-11 A family rehabilitation program using Theraplay

*Lassenius-Panula, Lotta*¹; *Molander-Landell, Christina*²

¹Folkhälsan, Finland; ²Folkhälsans förbund, Finland

The author will present a family-rehabilitation project, provided by **Folkhälsan** a non-governmental organization in the social welfare and healthcare sector in Finland. The three-year-long project started in 2007 as a part of larger rehabilitation program for children with psychiatric disorders, initiated by **The Social Insurance Institution of Finland**. 13 children, age 5–11, all with a neuropsychiatric or psychiatric diagnose, were chosen to the program. The aim was to help the families create and strengthen a positive atmosphere of interaction and a better understanding of the child. The program comprised a combination of a group process (4-day-long family camp) and an individual therapy part (max. 29 sessions) using

Theraplay, an attachment based, interactive parent-child therapy. The work started with an evaluation including a video taped interaction observation MIM (Marschak Interactive Method). The goals for the treatment were set during a feedback discussion with the parents, creating a working alliance. We used a salutogenic-resource orientated-approach in the family therapeutic work. The children had a wide range of difficulties: 7 had severe speech and language problems with secondary contact disorder or behavioural problems, 3 had ADHD, 2 had mild mental retardation, one had severe RAD as the primary problem. An evaluation form and CBCL questionnaires were filled before and after treatment. A clear positive change in the symptoms of the child and in the atmosphere of the family was seen in most cases. In four cases family therapy was recommended after the program. Two children were recommended further assessment. All three groups had their own characteristics. Fathers were very involved in the processes and seemed to relax and enjoy the active, playful atmosphere. This concept seemed to offer help and support for children with different problems and most importantly, was able to involve the whole family.

P19-12 Voice movement therapy, a novel experiential group therapy for self-injury in young people: results from a wait-list trial

Martin, Graham; *Martin, Sophie*; *Swannell, Sarah*; *Lequertier, Belinda*; *Follent, Anna*

The University of Queensland, Child and Adolescent Psychiatry, Australia

Background: Self-injury appears to be increasing among young people, and has been implicated in later suicide. Treatment methods have been based in cognitive behavioural therapy, but a recent trial of group CBT failed to support earlier promise (Hazell, Martin et al., 2009). Dialectical Behaviour Therapy has a solid research base, but few studies have been completed with young people and, even in modified forms it has stringent conditions demanding commitment (see Muehlenkamp, 2006). Either existing therapies need appropriate modification, or new therapies researched for their ability to change self-injury behaviour. Voice Movement Therapy is experiential and based in accepting the body, as well as re-finding the voice; it appears to be fun and meaningful for even very damaged young people.

Aim(s): The paper will describe Voice Movement Therapy and report on the first wait list trial of group VMT for young self-injurers.

Materials and methods: 5 young people completed the first trial. A wait list group of 9 young people has begun the 10-week group therapy at time of writing.

Results and conclusions: Results from the first trial show significant change in depression, self-esteem, emotion regulation, body awareness and acceptance, as well as a reduction in self-injury (despite the small numbers). We will present the overall results at ESCAP, and discuss implications.

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P19-13

Making a difference: implementing and evaluating the effects of Mellow Parenting in Russia

*Morozova, Tatiana*¹; *Puckering, Christine*²; *Dovbnya, Svyatoslav*¹

¹Firefly Childrens network, Mellow Parenting, Russian Federation; ²Mellow Parenting, UK

There are estimated to be approximately 800,000 children in state care there—more than in all the Soviet Union soon after the Second World War. Since the parents' own emotional needs, especially for attachment to a constant adult, were generally unmet during their own childhoods, they seem often confused by their babies and small children. One of our partners in St Petersburg, the Korchak Centre, works with and supports parents who themselves grew up in institutions. Many of them left the institution at the age of 7 having had no experience of parenting, but later found themselves with their own young children to look after. Mellow Parenting (MP) is the first structured and evaluated program address both parent and parenting issues in Russia.

Method: MP training was organized for the staff of women's and children's services to support mothers with young children whose development is at risk. The MP groups for parents were started in St. Petersburg in Novgorod. All the materials for parents and professionals were translated into Russian and edited. Entry criteria for parents to take part in the groups were carefully discussed. Specialists who took part in MP educational course and run the groups reported that they have never seen such a powerful instrument (so intensive program with so strong results for mothers and children). The best thing according to the professionals who was running the groups was to observe, how mother were changing. Mellow Parenting training was first offered to Russian Practitioners in 2007 and intervention has subsequently been run in four sites. As part of a workshop with British and Russian colleagues, this presentation will examine the research outcomes for parents and children who have taken part in the programme and the results compared to a control group.

P19-14

How to enhance learning and outcomes in a multidisciplinary child and family mental health organization with diverse clientele—example Helsinki

*Paasio, Petteri*¹; *Pajari, Heli*²

¹City of Helsinki, Social Services, Finland; ²City of Helsinki, Family Counselling, Finland

Background: Helsinki City Family Counselling is a multidisciplinary organization consisting of social workers, psychologists and child psychiatrists. It provides help with questions related to developing, upbringing and parenting of a child or an adolescent as well as help with family crisis.

The traditional way to assure the effectiveness of child and family mental health services and therapy has been based on qualitative assessment of the client progress case by case. In addition to this, it is important to manage information about all the client processes and outcomes in order to find ways to the best clinical practice as well as the best use of the limited resources.

Aim: We describe main phases and reasons in on-going initiative in Helsinki City Family Counselling to create organizational practice, structure and knowledge management for organizational learning and evaluation of effectiveness of the services.

Materials and method: Reasons for initiative are based both on the accountability of the organization and the necessity to create a common learning environment—especially when the organizational context is multidisciplinary professions and wide range and diversity of children and family problems.

The methodology of the evaluation of effectiveness is based on the realist evaluation where the interest is not only to measure the net effect of the intervention but to build the ability to recognize what works for whom and in what context.

Most important phases of the implementation are the informed selection of outcome-measures and building up a classification instrument for assessment of different child and family problems.

Results and conclusion: 1. Evaluation of effectiveness as an organizational practice is not too complicated but can create a very fertile environment for learning.

2. Main challenge in implementation is connected to the change of the organizational culture and the availability of useful information technology.

P19-15

Group therapy for unaccompanied minors. Does it work?

*Serneels, Geertrui*¹; *Nlandu, Alain*²; *Lampo, Annik*³

¹Solentra npo/Childpsychiatrical unit of the University hospital Brussels, Belgium; ²Solentra npo/Childpsychiatrical unit of the University hospital Brussels, CONGO (DEM.REP); ³Head of Department of the Childpsychiatrical unit of the University hospital Brussels, Belgium

Solentra is a not-for-profit organization embedded within the child psychiatrical unit of the UZ Brussel. It focuses on the treatment of children who are victim of interrelational violence, with a special emphasis on children with a different cultural background. In practice, our population consists of refugee children and migrant children. We are treating approximately 140 children on a yearly basis. The last 3 years we have offered group therapy for unaccompanied minors in the asylum procedure. Every year two groups start, one in the hospital and one in a reception center for unaccompanied minors. Each group consists of 10 à 15 participants of the same sex and takes 15 sessions. We will describe the content and the effectiveness of one of these group therapies. Each session (15 in total) was recorded and transcribed. Before and after the group therapy, the T(rauma) S(ymptom) C(hecklist) for C(hildren) and a semi-structured interview, developed by us on the basis of a quality of life questionnaire and of a stabilization profile, was taken of every participant (10). At the end of the session, we held a focus group to find out what the unaccompanied minors thought of the therapy. Results hereof will be communicated.

P20-01

Psychotic-like experiences, GHQ-28 scores and suicidal ideation in non-psychotic adolescent patients

Aoki, Shozo; Matsushita, Kanemune; Miyazaki, Tetsuji; Wani, Kenta; Takahashi, Yuu; Hara, Shogo; Nakamura, Takashi; Wani, Taiki; Washida, Kenji

Kawasaki Medical School, Department of Psychiatry, Japan

Purpose: The aim of this study is to investigate the relations among prodromal state of psychoses (PLEs) and the general mental/physical health conditions (GHQ-28) and suicidal ideation.

Objects and methods: We studied 100 adolescents (10–17 years old) who were referred to the psychiatric Outpatient Clinic of Department of Psychiatry, Kawasaki Medical School Hospital from September 2007 to September 2008.

We used the Self-descriptive questionnaires including the items of PLEs and the items of General Health Questionnaire-28 (GHQ-28).

Result:

1. PLEs were found in 41 adolescents (41%).
2. Suicidal ideation were found in 29 adolescents (29%).
3. Severe deliberate self-harm were found in 8 adolescents (8%).
4. Total scores of GHQ-28 of adolescents with PLEs were significantly higher (13.7–6.8, $p < 0.01$) than those without PLEs.
5. Total scores of GHQ-28 of adolescents with suicide ideation were significantly higher (18.7–4.4, $p < 0.001$) than those without suicidal ideation.
6. Total scores of GHQ-28 of adolescents with severe deliberate self-harm were significantly higher (20.50–3.73, $p < 0.001$) than those without severe deliberate self-harm.
7. The adolescents with PLEs showed significantly higher suicidal ideation than those without them.

Discussion: We will discuss subscale scores of GHQ-28 in adolescents with PLEs, adolescents with suicidal ideation and adolescents with severe deliberate self-harm.

Then we will discuss the relations among PLEs and GHQ-28 scores and suicidal ideation.

P20-02

Predictive factors for relapse in adolescent first episode psychosis

Dobrescu, Iuliana¹; Ivanov, Adela²

¹Carol Davila University of Medicine, Child and Adolescent Psychiatry, Romania; ²Alexandru Obregia Psychiatric Hospital, Romania

Background: Despite 80% of patients with first episode psychosis experienced symptoms remission 1 year after, there is a high relapse rate within 5 years, and prevention remains a challenge for mental health professionals.

Objective: This paper aimed to investigate the factors involved in relapse, in a sample of subjects, aged between 14 to 18 years, meeting diagnostic criteria for first psychotic episode.

Method: Socio-demographic and clinical data were collected from a cohort of 67 patients treated in Child and Adolescents Psychiatric Clinic in Bucharest from 2004 to 2007. The data included: gender, age of onset, duration of untreated psychosis, premorbid adjustment, social functioning, family history of psychosis, initial ratings on Scale for Assessment of Positive and Negative Symptoms (SAPS and SANS), IQ level, and adherence to treatment.

Results: From statistical analysis revealed that there is an association between rate of relapse and treatment discontinuation. We found also a correlation between family history of psychosis, and lower childhood IQ and higher rate of relapse. Longer duration of untreated psychosis was associated with lower probability to achieve remission for negative symptoms, and there is no correlation with positive symptoms.

Conclusions: Non-adherence to medication was the most important factor associated with relapse in our sample. Relapse rate was also connected with family history of psychosis. Therapeutic strategies involving family members were necessary.

P20-03

Antipsychotic treatment of early-onset psychosis in terms of school reintegration and quality of life

Grozavescu, Raluca¹; Druga, Simona²

¹University of Medicine and Pharmacy “Carol Davila”, Child and Adolescent Psychiatry, Romania; ²Medlife Clinic, Bucharest, Child and Adolescent Psychiatry, Romania

Early-onset psychosis are disorders with chronic outcome, treatable but not curable and early diagnosis and treatment are very important. Atypical antipsychotic drugs can help improve social skills and academic achievement, reducing/removing psychotic symptoms, decreasing the frequency of acute episodes/preventing relapses, have beneficial effect on cognition (slow or stop the deterioration of cognitive) and the control of psychotic symptoms allows the psychosocial interventions.

Objective: To compare the school reintegration and Quality of life after 3 years from the onset of the first episode of psychosis in subjects who received treatment with atypical respectively typical antipsychotics.

Methods: 132 patients-sample, aged 10–18 years, admitted in Al Obregia Hospital from Bucharest, Child and Adolescent Psychiatry Department, in 2003–2008, with an early onset psychosis (DSM IV criteria), who received treatment with atypical (71 subjects) or typical antipsychotic (61 subjects), respectively. We used Pediatric Quality of Life Enjoyment and Satisfaction Questionnaire (PQ-LES-Q). Data were statistically processed using ANOVA method.

Results and conclusions: We obtained statistically significant differences ($p = 0.001$) between subjects who received atypical antipsychotics (mean = 48.07, SD = 6.149, SE 0.730), and subjects who received typical antipsychotics (mean = 44.43, SD = 5.806, SE 0.743). There were also significant differences in reintegration in school after 3 years from the onset of the psychosis ($p < 0.0001$), the atypical antipsychotic treatment to correlate with breaks shorter than an year.

Keywords: Early-onset psychosis, quality of life

P20-04

Psychotic episodes associated with the menstrual cycle in a 12-year-old girl

Grünwald, Barbara¹; Korte, Alexander¹; Böhm, Almuth¹; Schwenck, Christina¹; Anthuber, Sabine²; Schulte-Körne, Gerd¹

¹Ludwig-Maximilians-University Munich, Child and Adolescent Psychiatry and Psychotherapy, Germany; ²Ludwig-Maximilians-University Munich, Department of Gynecology and Obstetrics, Germany

Background: Association of mensural cyclic hormonal changes with psychopathologic symptoms in female subjects is a widespread and well-known observation. In young female adolescents, psychotic

symptoms and especially their occurrence in mensural periodicity are a rare finding. Although there are a number of case descriptions predominantly in adult women, systematic studies exploring the underlying biological pathogenesis and rational therapeutical options are lacking to date.

Case presentation: We were able to document three subsequent psychotic episodes of a 12-year-old girl in strong temporal association with her menstrual cycle. The episodes started 7 months after her menarche on the background of a normative physical, mental and pubertal development. Psychopathological symptoms developed gradually, increasing to the full picture in 2–3 days, and included motor and thought retardation, psychomotor tension, anxiety, perplexity, sleep disturbances, and acoustic hallucinations. Episodes lasted for 10–12 days, and symptoms always regressed completely. Acute infection, metabolic disorders, and intoxication were ruled out by clinical and laboratory examination; MRI scan of the brain and EEG were normal.

Following the hypothesis of falling serum estrogen levels causing the psychotic symptoms, we treated our patient with a low-dose hormone substitution therapy (estrogen/progesterone combination). Since then she has been symptom-free.

Conclusions: Due to the lack of clearly contoured diagnostic criteria menstrual psychoses in women are likely to be underdiagnosed. Systematic clinical and biological research for the pathogenetic background is needed to assess the existence of menstrual cycle-associated psychoses as a disease entity. Regarding possible major prognostic and therapeutic consequences, it is essential to be aware of this clinical phenomenon even in young female adolescents.

P20-05

Effectiveness and tolerance of clozapine: a long-term study in a group of early-onset treatment-resistant psychotics

Ledda, Maria Giuseppina; Serci, Maria Celeste; Cossu, Silvia; Porcu, Lucia; Cianchetti, Carlo

University Hospital of Cagliari, Child and Adolescent Neuropsychiatry, Italy

Introduction: Several studies support the efficacy of clozapine (CLZ) in adults with schizophrenic spectrum disorders. Few data are available on its long-term efficacy and tolerance in children and adolescents.

Material and methods: We studied children and adolescents with schizophrenic or schizoaffective disorders, in which CLZ was introduced due to the insufficient efficacy of other antipsychotics. Antipsychotic treatment began at ages ranging from 10 to 17 years (mean 15.4), and introduction of CLZ from 11 to 17 years. The maximum CLZ dose was 400 mg/day.

Results: Twenty patients are still being treated with CLZ after a period ranging from 3 to 10 years. Their clinical status at 3-year follow-up, evaluated with PANSS and C-GAS/GAF, compared with that at the beginning of CLZ treatment, showed greater improvement than the one obtained with preceding antipsychotic treatments. Moreover, at 5-year follow-up, the mean GAF of patients taking CLZ was significantly higher than the one of 20 patients treated with other antipsychotics. In the 20 patients taking CLZ, adverse effects occurred in 10 and were as follows: weight gain in 7, hyperglycemia

in 2 and type 1 diabetes in 1. However, in these patients, the balance of efficacy vs adverse effects favored continuation of CLZ treatment. Minor adverse effects occurred in 14 patients. In 7 other patients treated with CLZ, the drug was shifted to other antipsychotics after a period from 1 month to 5 years, due to lack of efficacy in 3, neutropenia ($<1,500 \text{ mmc}^{-1}$) in 2, excessive weight gain ($\text{BMI} > 31$) in 1 and seizures in 1.

Conclusions: Although serious adverse effects required CLZ discontinuation in 4/27 patients, and metabolic adverse effects occurred in 4/20 patients, in most cases the drug led to clear clinical improvement as compared to other antipsychotics. This suggests an early CLZ treatment in resistant psychotic children and adolescents, due to high probability of positive response, persisting even in the long-term.

P20-06

Similar efficacy results in short-term and long-term studies of adult and adolescent patients with Schizophrenia treated with aripiprazole

Loze, Jean-Yves¹; Forbes, Robert Andrew²; Aurang, Catherine²; Jin, Na²; Iwamoto, Taro²; Carson, William²; Correll, Christoph³

¹Otsuka Pharmaceutical Europe Ltd., France; ²Otsuka Pharmaceutical Development and Commercialization, Inc., USA; ³Zucker Hillside Hospital, USA

Objective: These post-hoc analyses were performed to assess the extent to which the short-term and long-term efficacy of aripiprazole in adolescent patients with schizophrenia are comparable to results from similarly designed studies conducted in adults.

Methods: A comparison between two data sets is presented demonstrating statistical evidence supporting similar treatment difference between adolescent and adult populations in the short-term double-blind studies. In addition, supportive evidence is presented of a sustained effect after acute treatment in a long term open-label adolescent study compared to the treatment effects in controlled long-term studies in adults.

Results: Comparison of short-term data shows that 95% confidence intervals for the treatment difference between aripiprazole and placebo for the pediatric study and the adult study are overlapping. Comparison of long-term data shows that the mean change from baseline at week 26 for the adolescent patients (-10.96) was very similar to that at week 26 for the adult patients (-14.3). Likewise, the response rates for the adolescent and adult populations at week 26 are also similar (38.95 vs. 42.25%, respectively). Data from the long-term open-label study in adolescents was also compared to the 52-week, haloperidol-controlled phase study in adults. Sustained efficacy indicated by mean change from baseline on the PANSS Total Score can be demonstrated for up to 32 weeks of treatment in the adolescent patients (-40.2); and up to 34 weeks (-40.9) and for 52 weeks (-42.6) of treatment in adult patients. Percent of adolescents achieving remission at 27–32 weeks (82.3%) was similar to remission rates in adult studies at week 26 (75.5%) and at week 52 (79.0%).

Conclusions: Treatment differences between aripiprazole and placebo groups are similar in adolescents and adults with schizophrenia both in short-term and long-term trials. These results support the extrapolation of adult long term data to adolescents.

P20-07

Early response predicts future treatment success during aripiprazole treatment of adolescents with Schizophrenia

Forbes, Robert Andrew¹; Loze, Jean-Yves²; Carson, William¹; Chen, Chien-Feng¹; Iwamoto, Taro¹; Mankosky, Ray³; Correll, Christoph⁴

¹Otsuka Pharmaceutical Development and Commercialization, Inc., USA; ²Otsuka Pharmaceutical Europe Ltd, France; ³Bristol Myers Squibb Co., USA; ⁴Zucker Hillside Hospital, USA

Objective: To evaluate the predictive value of early response in adolescents with schizophrenia treated with aripiprazole (ARI) in a randomized, placebo-controlled trial.

Methods: Post-hoc analysis of data from a 6-week, randomized, double-blind, placebo-controlled trial of ARI (10 or 30 mg/day) in ages (13–17 years) with schizophrenia. Early Response (ER) was defined as $\geq 20\%$ reduction from baseline in PANSS (Positive and Negative Syndrome Scale) total score at week 3. Response was defined as $\geq 20\%$ reduction in PANSS at endpoint (week 6, LOCF). Remission was defined as < 3 (mild or less) on 8 PANSS items at week 6 (LOCF). Sensitivity, specificity, positive predictive value (PPV), and negative predictive value (NPV) were calculated, as well as percent of PANSS reduction by week in responders.

Results: 294 patients were included in the analysis (ARI n = 196; placebo n = 98). For ARI patients, in predicting response, ER at week 3 demonstrated: sensitivity = 59%, specificity = 99%, PPV = 86%, NPV = 68%. For remission, ER at week 3 demonstrated: sensitivity = 72%, specificity = 76%, PPV = 83%, NPV = 62%. For ARI patients, nearly 50% of the PANSS reduction was achieved by week 2; up to 75% by week 3; a similar pattern was observed with placebo.

Conclusions: This is a confirmation that, like in adults, the majority of response occurs early in adolescents with schizophrenia. Moreover, those who respond early are likely to maintain that status at 6 weeks. Further analysis is warranted to better characterize responders and non-responders.

P20-08

Copy number variations in psychotic disorders in children

Pejovic Milovancevic, Milica¹; Mandic Maravic, Vanja²; Kostic, Milutin²; Mitkovic, Marija²; Garibovic, Emina²; Aleksia-Hil, Olivera²

¹Institute of Mental Health, Serbia; ²Institute of Mental Health, Serbia

Background: Psychiatric disorders are result of genetic and environmental interaction and are considered to be complex genetic disorders. Recent genome-wide association studies (GWAS) have shown the presence of specific copy number variants (CNVs) in schizophrenia in comparison to healthy controls. The aim of our study was to determine the CNVs in the Serbian sample of patients with early onset psychoses.

Methods: The sample consisted of 71 patients with early onset psychoses (onset before the age of 18) and 86 healthy controls. The patients were diagnosed using the ICD-X criteria, Kiddy SADS and Schedule of Affective Disorders and Schizophrenia (SADS) diagnostic interview. The genetic analyses were performed using illumina microarrays.

Results: The Chi-square values were not statistically significant, as expected, due to small sample size. We further examined the SNPs with the lowest p value, showing a trend in our results. In comparison to the published results, SNP rs9960767 (C allele freq. 0.140, OR 0.47, p 0.046, chr 18, region TCF4) differs significantly, with supposed protective, instead of so far defined risk effect. Also, in our sample, two patients had significant CNV findings, deletion 15q11.2 (associated with schizophrenia) and duplication 17q12 (associated with epilepsy).

Conclusion: These results of our sample show that there are significant findings in region essential for brain development (TCF4). Also, our findings demonstrate the association of early onset psychotic disorders with CNVs found in the previous studies of schizophrenia. Larger samples could provide more significant findings. Recognizing the genetic variants in this group of patients, as well as the neurobiological pathways they influence might provide the possibility of defining the etiology of psychotic disorders, as well as new therapeutic solutions.

P20-09

Psychopathology in the offspring of bipolar disorder and schizophrenia parents compared to community controls

Sanchez-Gistau, Vanessa¹; De la Serna, Elena²; Romero, Soledad³; Baeza, Inma⁴; Moreno, Lola⁵; Noguera, Ana³; Flamarique, Itziar³; Bernardo, Miquel⁶; Castro-Fornieles, Josefina⁴

¹Hospital Clinic/2009SGR119, Child and Adolescent Psychiatry, Spain; ²Hospital Clinic/2009SGR1119/CIBERSAM, Spain; ³Hospital Clinic, Spain; ⁴Hospital Clinic/CIBERSAM/2009SGR119, Spain; ⁵Gregorio Marañon/CIBERSAM, Spain; ⁶Hospital Clinic/CIBERSAM, Spain

Background: Studies evaluating children and adolescents offspring of bipolar (BpO) and schizophrenia (SchO) have found rates of non-psychotic disorders of 40–60% in both groups. Unfortunately only one research group has directly compared prevalence of psychopathology between BpO and Sch and they did not found differences between them.

Objective: To compare the prevalence of psychopathology BpO, SchO, and offspring of community controls (CcO).

Methods: Thirty-nine BpO, thirty-four SchO and seventy-four CcO aged between 6 and 17 years old were assessed using the Schedule for Affective Disorders and Schizophrenia for School Age Children-Present and Lifetime version. Participants were also evaluated with the Premorbid Adjustment Scale (PAS), Children's Global Assessment Scale (CGAS) the Conner's Parent Rating Scales, the Strengths and Difficulties Questionnaire, the Hamilton Depression Rating Scale, the Young Mania Rating Scale and the Child Mania Rating Scale. Absence or presence of DSM-IV Axis I diagnosis in parents was confirmed using a structured clinical interview (SCID-I). All offspring were assessed by a qualified psychiatrist blinded to parental status.

Results: Nearly 57% BpO and 62% SchO met criteria for an axis I disorder, compared to 21% CcO. In comparison to BpO and CcO, SchO displayed significantly higher rates of externalizing disorders such as ADHD (38.2%). On the other hand, BpO exhibited significantly greater rates of mood disorders (25.6%) compared to SchO and CcO.

Conclusion: Rates of psychopathology in BpO and SchO were higher than in HcO, and similar to those reported in the literature. When carrying out a direct comparison between BpO and SchO, mood disorders were

found to be more frequent in BpO, while ADHD was more prevalent in SchO. SchO obtained higher scores than cO in the CGAS, the PAS and in questionnaire domains related to conduct, performance and peer relationships, which suggests a lower role performance of SchO.

P20-10 Schizophrenia spectrum disorder in adolescents with intellectual disability (ID): a comparison with patients without ID

Ledda, Maria Giuseppina; Porcu, Lucia; Serci, Maria Celeste; Cocco, Monica; Cianchetti, Carlo

University Hospital of Cagliari, Child and Adolescent Neuropsychiatry, Italy

Introduction: Only few studies analyzed differences in the clinical expression of schizophrenic spectrum disorders (SSD) occurring in patients with intellectual disability (ID), none of them concerning children and adolescents. Moreover, there are no data in adults on disease outcome.

Material and methods: We studied 16 patients (7 males) affected with ID and SSD (ID/SSD group), with SSD onset ranging from 12 to 17 years of age (mean 14.9 ± 1.6). We compared this group with 31 patients (18 males) having SSD without ID (noID/SSD group), with SSD onset ranging from 12 to 17 years (mean 15.1 ± 1.7). Diagnoses were made using K-SADS-PL. Clinical differences were investigated using the PANSS and C-GAS/GAF.

Results: Premorbid C-GAS level (inferred from school and parents' reports) was obviously significantly lower in the ID/SSD group (mean 43.5 ± 12.5 vs. 65.5 ± 9.6 , $p = 0.008$). The clinical picture at SSD onset was evaluated with the PANSS: mean total scores were very similar (132.2 ± 19.6 in ID/SSD vs. 131.4 ± 22.0 in noID/SSD). However, a comparison of negative vs positive scores showed a significant prevalence of negative ones in the ID/SSD, but not in the noID/SSD group. All patients were treated with antipsychotic drugs, with more frequent adverse effects generally noted in ID/SSD. At 5 years follow-up after onset, PANSS scores were significantly higher in the ID/SSD group, with negative scores significantly higher than those in noID/SSD. C-GAS/GAF evaluation showed that deterioration of functioning at 5 years with respect to the premorbid situation was significantly higher in ID/SSD.

Conclusions: Our results show similar severity in ID/SSD as compared to noID/SSD in the initial phase of the disorder, but with a greater occurrence of negative symptoms in ID/SSD. Moreover, more severe psychopathology and deterioration of functioning is shown at the 5-year follow-up in ID/SSD. Our data indicate a more severe evolution of SSD with ID as compared to that without ID.

P21-01 Use of Aripiprazole in children and adolescents: case reports

Basgul, Saziye Senem¹; Uneri, Ozden²

¹MD, Goztepe Education and Research Hospital, Istanbul, Turkey, Child and Adolescent Psychiatry, Turkey; ²MD, Bakırkoy Research and Training Hospital for Psychiatry, Norology, and Norosurgery, Istanbul, Turkey, Child and Adolescent Psychiatry, Turkey

Aims: In children and adolescents, atypical antipsychotics have been largely used to treat aggression, mood instability, and psychosis.

Aripiprazole is a first potent D2 partial agonist agent among the new generation antipsychotics. There is a growing interest in the use of aripiprazole in children and adolescents. This study, we wanted to research the treatment of maladaptive behaviors with autistic and mental retarded children.

Materials and methods: We report on the use of aripiprazole in the treatment of maladaptive behaviors in 28 children and adolescents. All patients (13 cases with Autism and 15 cases with mental retardation) had been treated previously with several psychotropic drugs. Aripiprazole was initiated at a starting dose of 2.5 mg daily and optimal dosages ranged from 5 to 15 mg daily. Drug response was evaluated by using the Clinical Global Impressions-Improvement Scale 2 months after treatment.

Results and conclusions: Children 14.41 ± 2.5 aged years. All of the patients appeared to benefit from aripiprazole. Aripiprazole was well tolerated and effective in our cases. It was found to be effective and well tolerated for the treatment of maladaptive behaviors with autistic and mental retarded children, but prospective, double-blind placebo controlled studies are needed.

P21-02 Liver enzymes levels during Atomoxetine treatment in children and adolescents

Uneri, Ozden Sukran; Copur, Mazlum; Tanidir, Canan; Gunes, Hatice; Erdogan, Ayten

Bakirkoy Mental Health Hospital, İstanbul, Turkey, Turkey

Objective: Atomoxetine, the first nonstimulant approved for the treatment of ADHD, has been available for the past 4 years. However revealing of unknown adverse effects of atomoxetine may take a long period of time. The objective of this study was to investigate the changes in the liver enzymes levels associated with 1 month of atomoxetine treatment in a real-world attention deficit hyperactivity disorder (ADHD) population.

Method: A retrospective chart review was done to evaluate the patients treated with atomoxetine with patients' baseline and 1 month follow-up hepatobiliary function tests including alanine aminotransferases (ALT) and aspartate aminotransferases (AST), gamma glutamyl transferase (GGT), alkaline phosphatase (ALP) and serum bilirubin levels. Over a 4-month period, 85 patients treated with atomoxetine were identified.

Results: Elevation of liver enzymes and bilirubin from the defined normal levels was not observed in any of the patient. There was no significant change in the liver enzymes and bilirubin levels between baseline and 1 month.

Conclusion: Taking into account the limitations of a retrospective chart review in nonrandomized samples, it appears that atomoxetine treatment in the short term commonly does not lead to liver function changes at therapeutic doses in children and adolescents. Further studies are needed to assess the LFTs abnormalities in youth population.

P21-03 The use of psychotropic medication between age 13 and 23. Findings from the Finnish 1981 Nationwide Birth Cohort Study

Gyllenberg, David¹; Sourander, Andre²

¹University of Helsinki, Department of Child Psychiatry, Finland;

²University of Turku, Department of Child Psychiatry, Finland

Background: Most previous studies of psychotropic medication use among young people have operated with one-year prevalence and have not managed to follow-up the subjects.

Aims: To describe the incidence of antidepressant, anxiolytic, and antipsychotic purchases between age 13 and 23 in a representative sample; and to examine the proportion of subjects who had purchased psychotropic drugs and also had purchased other psychotropic drugs or psychiatric hospital treatment (PHT).

Methods: 5455 subjects born in 1981 were followed up between age 13 and 23 using the National Prescription Register. Information about PHT was based on the National Hospital Discharge Register.

Results: 11.3, 4.6, and 2.0% had purchased antidepressants, anxiolytics and antipsychotics, respectively. The incidence of all three drug groups increased in the late teens in both sexes. More females had purchased antidepressants than males, but no statistically significant sex difference was found for anxiolytics or antipsychotics. Among subjects with antidepressant purchases, 15% had purchased antipsychotics, 32% had purchased anxiolytics, and 25% had been admitted for PHT. Among subjects with anxiolytic purchases, 72% had purchased antidepressants. Among subjects with antipsychotic purchases, 81% had purchased antidepressants, 78% had been admitted for PHT and 45% had been admitted for psychosis.

Conclusions: Antidepressant use during late adolescence and young adulthood is common and it is a major public health concern to prevent depression and anxiety disorders that require antidepressant use. Subjects who are prescribed antipsychotics require extensive evaluation and follow-up, as the majority of them are admitted to hospital treatment at some point.

P21-04

SENTIA: Spanish Online Adverse Effect Registry for safe antipsychotic treatment in children and adolescents

Palanca Maresca, Inmaculada¹; Ruiz Antoran, Belen²; Jimenez, Sara³; Olza, Ibone³; Sancho, Arancha²; Sancho, Arancha³; Cabrera, Lourdes²; Valencia, Alfredo³

¹Puerta de Hierro-Majadahonda University Hospital, Psychiatry, Child Psychiatry Unit, Spain; ²Puerta de Hierro-Majadahonda University Hospital, Clinical Pharmacology, Spain; ³Puerta de Hierro-Majadahonda University Hospital, Psychiatry, Spain

Background: Antipsychotic prescription in the paediatric population has risen dramatically over the past decade. Most treatments are symptomatic and long lasting. In contrast, scientific evidence regarding long term safety in this population is limited.

Aim: To introduce SENTIA: Program for “Safe Neuroleptic Treatment in Children and Adolescents”. SENTIA is an online platform for a Spanish multicentre safety monitoring network, with public funding. Its aims are: 1. Prevention and early detection of adverse events and pharmacological interactions of antipsychotic treatment in the paediatric population. 2. To enhance treatment adherence and family alliance. 3. To develop an on-line extensive pharmacovigilance registry of antipsychotics in the paediatric population that supports a long term, multicentre observational safety-oriented study.

Material and methods: Children and adolescents, regardless of the diagnosis or clinical symptoms that motivate the prescription, currently being treated with or are going to start antipsychotics, are referred by their physicians at Primary Care and Child and Adolescents Outpatient Clinics to the SENTIA Clinic at the Hospital. Those

accepted to be included in the Online Registry, after completing the Informed Consent, are monitored within flexible, but regular periods of 1–3 months after initiation or change in treatment and each 6 months for an unlimited period. Those who abandon or interrupt treatment are asked to maintain as controls. Data collection includes: 1. Demographics. 2. Personal Medical and Psychiatric History. 3. Semi-structured psychiatric evaluation. 4. Pharmacological Record. 5. Adherence evaluation. 6. Lifestyle data. 7. Adverse effects record. 8. Physical exam. 9. Biological parameters. Access to SENTIA Online Registry of other professionals and hospitals from Spain will be progressively implemented.

Results: Launch in January 2011. Full Registry description and 6 months preliminary data will be presented.

P21-05

Two SSRIs and a rare endocrine side effect; two case reports

Zeki, Ayse¹; Unal, Dilek²; Cengel Kültür, Ebru²

¹Hacettepe University Faculty of Medicine, Child and Adolescent Psychiatry Department, Turkey; ²Hacettepe University Faculty of Medicine, Child and Adolescent Psychiatry, Turkey

Background: The selective serotonin reuptake inhibitors (SSRI) are one of the commonest psychopharmacological agents used worldwide. They are effective and easy to administer with lesser side effects. Gastrointestinal disturbances, disinhibition, and sexual problems are commonly reported with SSRI use, on the other hand galactorrhoea is only rarely mentioned among SSRI-related side effects. However, Egberts et al. (1997) reported an 8-fold higher risk for galactorrhoea with SSRIs compared with other antidepressants.

Objective: We here describe two cases of galactorrhoea induced by the two different SSRIs; Citalopram and Sertraline.

Case report: Case 1 had galactorrhoea associated with the use of 5 months of citalopram 20 mg/day with high serum prolactin level and Case 2 had galactorrhoea after 4 months of sertraline 50 mg/day use with normal serum prolactin level. Both patients were evaluated for possible causes of galactorrhoea including pituitary adenoma which was excluded with hypophyseal MRI. For Case 1; galactorrhoea disappeared and serum prolactin level returned to normal after citalopram dosage reduced to 10 mg/day. For Case 2; sertraline was stopped and following which, galactorrhoea stopped completely within couple days.

Discussion: Galactorrhoea is not always reported in correlation with high serum prolactin levels. Nearly 50% of cases have increased prolactin level. It is meaningful to suggest possible other unknown mechanisms involved in galactorrhoea occurrence. More research is necessary to understand SSRI induced galactorrhoea. This unusual side-effect of SSRIs could be annoying and frightening especially for a young women. Physicians needs to be aware of this side effect and how to manage it.

P22-01

The mediating effects of response styles on the effect of depression tolerance on psychological fulfillment

Adachi, Tomoko; Kono, Shoko; Ishii, Hidetoki

Nagoya University, Japan

The effects of depression tolerance on psychological fulfillment were examined through the mediating effects of response styles. (avoidance; facing the issues; negative introspection; and diversion). Depression tolerance was a concept of accepting negative feelings and dealing them appropriately. It was composed of three factors those were confrontation with anxiety, tolerance to loneliness and self-assertiveness. It had been expected that high depression tolerance facilitated adaptive response style (facing the issues) and inhibited non-adaptive response style (avoidance and negative introspection). Furthermore, depression tolerance exerted a positive effect on psychological fulfillment indirectly, having being mediated by adaptive and non-adaptive response styles. A self report questionnaire survey was conducted on 171 college students (age range = 18–21). The results of path analysis indicated that facing the issues and negative introspection mediated the effect of depression tolerance on psychological fulfillment, though avoidance and diversion did not. As expected, depression tolerance exerted a positive effect on psychological fulfillment indirectly, having being mediated by adaptive response style that is facing the issues and non-adaptive response style that is negative introspection. Additionally, the results showed that self-assertiveness facilitated psychological fulfillment directly and the effects of all the 4 response styles were coordinated by depression tolerance. From those results, it was indicated that depression tolerance was necessary for psychological fulfillment.

P22-02

Psychiatric comorbidity in children and adolescents with epilepsy and its interaction with illness and family related factors: a Greek study

Antonopoulou, Vasiliki; Karavia, Sapfo; Hantzara, Vasiliki; Kolaitis, Gerasimos

University of Athens Medical School, Department of Child Psychiatry, Greece

Background: There is evidence that pediatric epilepsy is a stressful situation for children and parents. Stressful life events, less extended family social support, negative parents' attitudes toward epilepsy, parental perceptions of stigma, poor family adaptability and family conflict are significantly associated with increased emotional and/or behavioral problems in their children. The rates of psychopathology in children with epilepsy range from 37 to 77% in several epidemiologic investigations.

Aims: The present study examines systematically the interaction of illness-related variables and psychosocial variables in the development of psychiatric comorbidity in youth with epilepsy. One of the major aims of this study is to investigate the causal relationship among family psychosocial variables, illness-related variables and the psychiatric comorbidity in children with epilepsy and to examine the differences in the level of psychopathology between children/adolescents with new-onset epilepsy and children/adolescents with chronic epilepsy.

Methods: The participants are children and adolescents with epilepsy, aged 6–15 years, and their families. Subjects are assigned in two groups: the first group consists of participants with their first recognized seizure and the second group consists of participants with chronic epilepsy. A follow-up assessment is scheduled after a period of 6 months. The diagnostic tools for parents are: Parent's demographic characteristics, Parent's Response to Children Illness, Child Behavior Checklist and KIDSCREEN-52. The diagnostic tools for children/adolescents are: The medical history, Youth Self Report, Children Depression Inventory and KIDSCREEN-52.

Results and conclusions: The findings of this study will provide a better understanding of the psychosocial needs for children with epilepsy and their families and will contribute to the development of appropriate interventions by child and adolescent mental health professionals.

P22-03

Self-image and transitional object use in adolescence

Erkolahti, Ritva¹; Nyström, Marjaana²

¹Childpsychiatry Clinic, Satakunta Hospital District, Pori, University of Turku, Finland; ²University of Turku, Finland

Background: The use of a transitional object seems to be common in adolescence. The connection between self-image and a transitional object use in non-clinical adolescent populations has not been well documented in large samples of teenagers. Our former studies show that the adolescents with more depressive symptoms had more often a habit of using a transitional object. There are also correlation between depressive symptoms and poor self-concept.

Aims: The purpose of this study was to investigate the connection of a transitional object use with the adolescent's self-concept.

Materials: The study group consisted of 1,054 adolescents (465 boys, 589 girls) from normal comprehensive schools in Turku, a Finnish town with approximately 175,000 inhabitants. The mean age of both gender groups was 14.5 years (SD 0,5) and participants came from all social classes.

Methods: The background and transitional object use information was gathered with questionnaires. To assess the adolescent's self-concept we used the Offer Self-Image Questionnaire (OSIQ).

Results: The results showed a significant correlation between five OSIQ scales and a transitional object use. Adolescents having a transitional object had problems in impulse control, emotional tone, body image, social relations and emotional health.

Conclusions: The self-image of teenagers using transitional objects requires attention.

P22-05

Impact of neuromuscular diseases upon health-related quality of life of children and adolescents: a Greek cross-sectional study

Kaltsa, Argyro¹; Hantzara, Vasiliki¹; Barbareasou, Chariklia²; Tsipou, Haroula³; Kolaitis, Gerasimos¹

¹University of Athens Medical School, Department of Child Psychiatry, Greece; ²ICU "Aghia Sophia" Children's Hospital, Athens, Greece; ³University of Athens Medical School, Greece

Objective: To study Health Related Quality of Life (HRQoL) of children and adolescents with neuromuscular diseases and also the influence of different types and severity of the disease in relation to the developmental stage of the patients. Ultimately, to compare data regarding various aspects of quality of life of these patients to respective data regarding the general pediatric population and pediatric population with other somatic diseases.

Methods: The KIDSCREEN-52 HRQoL questionnaire for children and adolescents was administered to 57 children and adolescents (8–18 years) with neuromuscular diseases of varying types and

severity (Duchenne Muscular Dystrophy, Becker Muscular Dystrophy and type II Spinal Muscular Atrophy). The patients come from different regions of Greece, and they have been attended by the Specialized Ambulatory for Neuromuscular Diseases of the “Aghia Sofia” Children’s Hospital in Athens, Greece. In order to detect eventual psychopathology and adjustment problems, the Children’s Depression Inventory (CDI) and the Achenbach Child Behavior Checklist (CBCL 6–18 years) and Achenbach Youth Self Report (YSR 11–18 years) were administered to the patients and their parents. Finally, a Socioeconomic Status (SES) Questionnaire for children and adolescents was used.

Results: Preliminary results of this cross-sectional study concerning physical, psychosocial, and social well-being in relation to the specific type of neuromuscular disease in the various ages will be presented and ultimately will be compared to data concerning the general pediatric population and pediatric population with several other diseases.

Conclusion: This is the first study describing HRQoL of young patients with neuromuscular diseases in Greece. The results will help us understand the impact of various neuromuscular diseases on daily life, in different developmental stages, aiming towards a more effective and holistic organization of services provided.

P22-06

Quality of life in children with epilepsy

Lazar, Alina¹; Anton, Flavia²; Pomeran, Cristina³; Chicos, Paula¹; Craiu, Dana⁴; Mateescu, Laura⁵

¹“Prof. Dr. Al. Obregia” Hospital of Psychiatry, Child and Adolescent Psychiatry Department, Romania; ²University of Medicine and Pharmacy “Carol Davila”, Romania; ³University of Medicine and Pharmacy “Carol Davila”, Neuropaediatric Department, Romania; ⁴University of Medicine and Pharmacy “Carol Davila”, Neuropaediatric Department, Romania; ⁵University of Medicine and Pharmacy “Carol Davila”, Child and Adolescent Psychiatry Department, Romania

Objective: Assessment of quality of life and mental health problems in children with epilepsy.

Material and methods: The sample consisted in 100 subjects (4–18 years old) hospitalized in the Neuropaediatric Department of “Prof. Dr. Al. Obregia”, Hospital of Psychiatry, Bucharest. The data collecting period was May–October 2010. Inclusion criteria: Children hospitalized in paediatric neurology department with a diagnosed epilepsy disorder. Exclusion criteria: Children with other neurological disorder excepting epilepsy, children with other chronic somatic disorder, children prior diagnosed with mental disorder. The children with age between 4 and 10 years old did not answer to any questionnaire. The parents of the children with age between 4 and 10 years old fill in Household questionnaire, CBCL, SDQ parent form and FAD. The adolescents, more than 11 years old, answered to SDQ SR and YSR. The parents of adolescents fill in Household questionnaire, CBCL, SDQ parent form, FAD.

Results: Children with epilepsy have a relatively compromised quality of life with emotional and behavioral difficulties, but as well there is an impaired quality of life of the family unit as a whole.

P22-07

Quality of life and general health association with resiliency in caregivers of children undergoing hematopoietic stem cell transplantation (HSCT)

Mahmoudi-Gharaei, Javad¹; Hamidieh, Amir Ali²; Alirezai, Nargess³; Sadeghi Parvin, Samira⁴

¹Tehran University of Medical Sciences, Psychiatry Department, Islamic Republic of Iran; ²Hematology-Oncology and Stem cell transplantation research center, Tehran University of Medical Sciences, Islamic Republic of Iran; ³Tehran Psychiatry Institute, Tehran University of Medical Sciences, Islamic Republic of Iran; ⁴Psychiatry and Psychology research center, Tehran University of Medical Sciences, Islamic Republic of Iran

Aim: To investigate the association of quality of life and general health with resiliency in caregivers of children undergoing hematopoietic stem cell transplantation (HSCT).

Materials and methods: We included 69 children’s caregivers in this prospective study. Participants were caregivers of children undergoing HSCT at the Shariati Hospital, Hematology-Oncology and Stem Cell Transplantation Research Center in Tehran. At baseline (pre transplantation), quality of life and general health were assessed using WHOQOL-BREF and General Health Questionnaire (GHQ), respectively. Resiliency and impact of stress were evaluated by Connor-Davidson Resilience Scale (CD-RISC) and Impact of Event Scale (IES-R) respectively. CD-RISC and IES-R were administered at base line, after transplantation and at the time of discharge from hospital. Repeated measure ANOVA and linear regression model were used for data analysis.

Results: The mean age of participants and their children were 32.98 ± 6.28 and 7.97 ± 4.29 years, respectively. The total score of WHOQOL-BREF and GHQ were 25.58 ± 0.74 and 140.91 ± 11.43 at base line. Repeated measure ANOVA showed no statistically significant difference in IES-R and CD-RISC mean scores during transplantation process. However, linear regression analysis demonstrated that caregivers’ general health had positive correlation with resiliency. This is while, no correlation was observed between caregivers’ quality of life and resiliency.

Conclusion: The results of this study suggest that a good general health may be associated with better resiliency in caregivers of children undergoing HSCT.

Keywords: HSCT, stem cell, resiliency, quality of life, general health, children

P22-08

The relationship between quality of life and alleviate the symptoms of Asperger syndrome in children

Seliem, Yosra

Ain Shams University, 9st Matwali Fatah el dien last bridge fysal - giza, EGYPT

The relationship between quality of life and alleviate the symptoms of Asperger syndrome in children.

Objective of the study: is to investigate the relation between the quality of life of Asperger's syndrome children within their families, school life, medical service, and their symptoms.

Methods: Two groups of the study are (60) Asperger's syndrome children of both sexes, age, ranged from (6–12 years) diagnosed according to DSM 4' criteria of diagnosis. (30) Children are from High social class families, recruited from private clinics and centers and (30) children from low social class families, recruited from Abassia governmental mental Hospital, Cairo-Egypt. Tools: Gilliam Asperger (GAD) is applied to the children, and detailed quality of life sheet is applied to the families. Draw a man test is done To exclude children of I.Q. (70).

Results: Showed significant difference of the two groups regarding their symptomatology rating scale, in relation to their quality of life.

P22-09

An international comparison of children's QOL in Japan and Finland using Kid-Kindl and YSR

Tsuboi, Hiroko¹; Matsumoto, Mariko²; Keskinen, Soili³; Milovanov, Riia³; Suzuki, Nobuko⁴; Morita, Miyako²; Hatagaki, Chie²; Nomura, Asuka²; Maruyama, Keiko²; Makita, Reiko²

¹University of Human Environments, Japan; ²Nagoya University, Japan; ³Turku University, Finland; ⁴Tokohagakuen University, Japan

Introduction: We have been researching children's QOL and school environments in Japan and Finland. We were impressed by the many differences in compulsory school environments between Japan and Finland. Is there a relationship between children's QOL and school environments? The purpose of this study was to conduct an international comparison of QOL of Japanese and Finnish children using questionnaires.

Method: Participants: The sample consisted of 1,324 Japanese children and 212 Finnish children (The final Finnish data may reach 400).

Age: Participants are aged 9–10 and 13–14 (4th-grade and 8th-grade students).

Questionnaires: (1) Kid-Kindl (Ravens-Sieberer, U. and Bullinger M., 1998). It consists of six sub-scales: Physical well-being, Emotional well-being, Self-esteem, Family, Friends and School. (2) YSR: We used two sub-scales, Withdrawn and Aggressive behavior, from Youth Self Report (Achenbach, T.M., 1991).

Results and discussion: The QOL total, Self-esteem and School sub-scales results for Finnish children were significantly higher than those of Japanese children. Particularly, in the 8th grade children the differences between the two countries are remarkable. We consider these results from the view point of school environment and the relationship between teachers and students.

P22-10

Emotion in prejudice: towards a validation of a Western model of emotions

Akande, Adebo Will¹; Tserere, Maggie²

¹Institute of Research and Consultancy, Psychology, South Africa; ²NPA College, South Africa

The way one “feels” does influence the way one “acts” toward others—leading to the “expression of desired emotions during interpersonal relations”. The theory was that an individual's face, can reveal deeper state of the mind. Everybody experiences emotions from time to time, regardless of culture. Given the importance of emotions in human communication and decision making, the context of intergroup relations, with its themes of prejudice, stereotyping and discrimination against culturally dissimilar was touched on selectively. Using the Differential Emotions Scale (DES) and building upon Boyle's (1984) seminal work, with Sotho-speaking students, the present study reports a repeated-measure multiple discriminant function analysis for individual items across raters. The findings further indicate that majority of the DES items are sensitive indicators of the different basic and universal facial expressions. The correspondence of some of the results with prior research findings in the field of emotions, is discussed. Likely consequences of emotions are considered, and research needs and implications are discussed vis a vis uplifting individual happiness, collective identity and sense of connection to others. Taken together, the implication of these results and expectations argue for the studies of emotions in intergroup relations to be useful in theory and in practice.

P22-11

Representing life and future in drawing: an orphan house study

Damali Amiri, Mehdi¹; Akbari, Firouzeh²; Tajfar, Ahmad³

¹bu-ali sina university, Islamic Republic of Iran; ²Azad Islamic University, Islamic Republic of Iran; ³University of Medical Science, Islamic Republic of Iran

Children depict their surrounding in the pictures they draw. They consider the focus on the integrity, happiness, and the peace among the members of the family along with the water, sun and a beautiful house. On the other hand, the orphans living in the orphan house focus on new clothes, family and private rooms. In a study performed in 2005, some orphans, 40 individuals at the range age of 10–13, were asked to draw what they imagine about their current life on the paper. 60% of them depicted mothers and fathers in wedding clothes near a beautiful house and a car, 30% drew a private room full of toys and 10% had drawings about new and expensive clothes. The favorite colors for most of them were yellow and/or pink in the background. Five years later in 2010, they were asked to draw the pictures about their desires and future plans.

They drew themselves in the same role with the similar situations they conceived the previous 5 years. Most of them depicted themselves in big house with two children playing joyfully with their toys. Their jobs were somehow related to high income ones with ties and expensive clothes. The colors were more various relying more on brown and blue, which was related to their social interaction with other children in schools. The change in attitudes and beliefs cue to group interaction with other children and social education led them to modify some traces in their drawings. This paper tries to understand the orphans' fundamental conception of life and their change over time through their paintings and suggests some ways to improve their imagination toward a new life.

P23-01 Psychiatric and substance abuse disorders. Their passage into adult age from adolescence

Dominguez, Dolores¹; Torres, Angela²

¹University of Santiago de Compostela, Psiquiatría, Raddiología y Salud Pública, Spain; ²Psiquiatría, Radiología y Salud Pública. Universidad de Santiago de Compostela, Spain

Introduction: Current research show the importance of studying the continuities and discontinuities taking place from adolescence to adulthood.

Aims: To analyse the impact of the use of substances during the adolescence in the appearance of psychological problems in adulthood.

Methodology: 1. **Design:** community epidemiological research of a longitudinal and prospective type Phase 1 (adolescence) Transversal study of a unique phase on an at random and stratified sample representative of the Galician population from 12 to 18 (N = 2550) Phases 2 and 3 (adult age). Double phase study on an at random and stratified sample of the pool of subjects recovered from phase 1 (71%) 10 years later (N = 800). 2. **Instruments:** In phases 1 and 2 a sociodemographic and familiar questionnaire, an inquiry on the use of alcohol, tobacco and other drugs on the perception of general and psychological health and the Goldberg GHQ-60 are supplied. In phase 2 (adults) the GHQ-60 is used as instrument of screening and in phase 3 the interview DIS (Version III) by Robins as the instrument of diagnosis to all the subjects identified as “epidemiological case” in phase 2 and to the 10% the “no case”.

Results and conclusions: Psychiatric pathology and abuse of substances in adult age are associated to psychological discomfort and use of substances in adolescence.

P23-02 Associated psychopathology and general family functioning of highschool adolescents with spice drug use

Mateescu, Laura¹; Lefter, Gelu²; Ilie, Lucian²; Maracineanu, Irina²; Chicos, Paula²

¹University of medicine and Pharmacy, Child and Adolescent Psychiatry Department, Romania; ²“Prof. Dr. Al. Obregia” Hospital of Psychiatry, Child and Adolescent Psychiatry Department, Romania

Introduction: In Romania, during year 2010, the emergency departments and psychiatry clinics from all over the country were assaulted by the number of highschool adolescents with “spice” drug use.

Objective: To evaluate the associated psychopathology and general family functioning of highschool adolescents with “spice” drug use.

Material and method: The sample consisted in 15 adolescents hospitalized in Child and Adolescent Psychiatry Department of “Prof. Dr. Al. Obregia” Hospital of psychiatry, Bucharest, Romania and their families, during October–December 2010. The evaluation instruments used were DAST (Drug Abuse Screening Test—Adolescent), The DSM IV TR diagnostic criteria and FAD (Family Assessment Device) and Household questionnaire. The psychopathology associated with drug use, the family functioning and the other related factors with drug use were evaluated.

Results: 73% of the subjects samples were boys, depression was the prevailing associated adolescent psychopathology, all family systems reported significant dysfunction of general family functioning and parental associated mental health problems.

P23-03 Comorbidity in adolescents with excessive use of internet and computer games

Barth, Gottfried Maria¹; Batra, Anil²; Peukert, Peter²; Oezen, Meral²; Günter, Michael²

¹University of Tübingen, Child and Adolescent Psychiatry, Germany; ²University of Tübingen, Germany

Theme: Internet addiction or excessive computer gaming is a considerable problem among youths in Germany. But most of these adolescents show remarkable other psychic symptoms beside computer caused problems.

Method: 70 mainly male adolescents were examined the health care centre for internet addiction in Tübingen.

Results: 90% showed psychiatric comorbidity. Most common were depressive symptoms in 55%, then conduct disorder in 51%, Asperger syndrome in 21% and ADHD in 10%. Most of them with the exception of conduct disorder could be identified as preliminary to computer abuse.

Conclusion: Advice in the field of internet and computer abuse not only may reflect the computer associated symptoms but has to assess the whole mental state for not to ignore important psychiatric diagnoses at the bottom of the problem behaviour.

P23-04 Functioning of cannabis abuse and dependence criteria in a Dutch and a US sample

Delforterie, Monique¹; Creemers, Hanneke¹; Agrawal, Arpana²; Ende, van der, Jan³; Verhulst, Frank³; Huizink, Anja¹

¹University of Amsterdam, Research Institute of Child Development, The Netherlands; ²Washington University School of Medicine, Department of Psychiatry, USA; ³Erasmus University Medical Center Sophia Children’s Hospital, Department of Child and Adolescent Psychiatry, The Netherlands

Background: Previous research has noted that a unidimensional latent construct underlies the criteria for cannabis abuse and dependence. Additionally, research shows that the likelihood of endorsing certain criteria of cannabis abuse or dependence differs across subsamples. However, studies that address whether nationality contributes to heterogeneity in the latent abuse and dependence construct, and in the individual abuse and dependence criteria, are scarce. This is surprising since differences between countries on law enforcement might influence the likelihood of endorsing certain criteria, which might have implications for diagnosis.

Aims: We aim to study (1) the underlying construct of cannabis abuse and dependence, and (2) whether the cannabis criteria function differently across a Dutch and a US sample.

Materials and methods: Objectives were studied using data from 18 to 33 year old US and Dutch individuals from the general population that participated in respectively The National Epidemiological Survey

on Alcohol and Related Conditions (NESARC) and the Zuid-Holland study. Only participants who reported lifetime cannabis use were selected. In both samples, individual DSM-IV criteria for cannabis abuse and dependence were assessed for their lifetime occurrence using structured interviews. A multiple-indicator multiple-causes model (MIMIC) will be created to assess the influence of nationality on the individual symptoms, while still accounting for its effect on the underlying construct.

Results: Preliminary analyses show that the prevalence of cannabis abuse and dependence among lifetime ever users are higher in the US (41 and 17%) when compared to the Netherlands (22 and 7.6%). Results from the MIMIC model will provide more insight in differences in criterion functioning among US and Dutch citizens.

P23-05

The effect of sexual education on coping stress among married couple in Azad University, Iran: Roudhen Campus, 2009

Kavousi, Setareh

Youth and Women Employment and Empowerment Center, Technological Incubator of Shahid Beheshti Unvers, Islamic Republic of Iran

Sexual education and training is a very critical and a new subject to touch in Iran. Purpose of research i studying the effect of sexual education on coping stress among married. Hypothesis of research is that sexual education is an effective tool preventing and coping with stress of young married. Population of research is married aged 25 years old with one your marriage in Roudhen campus of Azad University. Number of samples is 20. The training package covered 12 sequential sessions of sexual training using Billings and Moos (1981) Coping Responses Inventory are.

Finding: It was interesting that this research is the first university research about sexual education in Iran. There is no significant difference among sexual training grades' volunteers at the 3 levels of pre-test, post-test and follow up at coping stress. There was is a significant difference overcoming their stresses.

P24-01

Trends of prevalence, incidence, utilization of psychotropic agents in Tic disorder: analysis of 10-year national health insurance dataset in Taiwan

Liang, Hsin-Yi¹; Chang, Hsueh-Ling²; Gau, Susan Shur-Fen³; Gau, Churn-Shiouh⁴

¹Chang-Gung Memorial Hospital at Linkao Medical Center, Taiwan, Child and Adolescent Psychiatric Department, Taiwan; ²Chang Gung Memorial Hospital at Linkao Medical Center, Department of Child Psychiatry, Taiwan; ³National Taiwan University Hospital, Taipei, Department of Psychiatry, Taiwan; ⁴College of Medicine, National Taiwan University, Taipei, Graduate Institutes of Clinical Pharmacy, Taiwan

Objectives: To describe the treated prevalence and incidence of tic disorder by gender and age; to analyze the demographic and health-seeking characteristics; to demonstrate the rates of psychiatric comorbid conditions and use of psychotropic agents; and to identify the correlates for use of psychotropic agents in years 1997–2007.

Methods: The data set of our study was the Longitudinal Health Insurance Database (LHID) 2005, a random sample of 1 million individuals from the National Health Insurance Database (NHIRD) in 2005. We selected outpatients with ICD-9-CM tic disorder (codes 307.2), ages 18 years old from 2000 to 2008 (data from 1997 to 1999 were not included because of A-code).

Results: The treated prevalence and incidence rates for tic disorder increased significantly from 2000 (0.58–0.44) to 2007 (1.63–1.05), respectively, with male to female ratio about 3.7–3.99 versus 1. The treated prevalence rate was highest at ages 6–9 years and the cumulative incidence was highest at ages 6–9 years. The majority of patients with tic disorder sought clinical services in medical centers and psychiatry specialized hospitals in northern Taiwan. Around 25.2 and 4.0% of patients with tic disorder were comorbid ADHD and epilepsy, respectively. The commonly used psychotropic agents were antipsychotics (43.5%), followed by methylphenidate (17.7%) and clonidine (8.1%). Male gender, increased age, and medical center were most associated factors for prescription of psychotropic agents. **Conclusions:** The findings suggest increased rates of patients with tic disorder seeking clinical services, but the rate of psychotropic agent usage from 2000 to 2008 remained constant. Moreover, use of psychotropic agents including antipsychotics can be predicted by several demographic and health seeking patterns.

P24-02

Quality of life and self-esteem in children with Tourette's syndrome and chronic Tic disorder

Tural Hesapcioglu, Selma; Kandil, Sema

Karadeniz Technical University Faculty of Medicine. Department of Child and Adolescent Psychiatry, Turkey

Aims: To assess the quality of life and self esteem in children and adolescents with Tourette's syndrome (TS) and Chronic Motor or Vocal Tic Disorder (CTD) in comparison with control group and determine the contributing factors of the differences between the groups.

Materials and methods: The study group is comprised of 57 subjects aged between 6 and 16 years who met the inclusion criteria out of 62 cases diagnosed with TS or CTD according to DSM-IV. The control group consisted of 57 subjects with no medical/mental chronic disease who were referred for different reasons and whose age and sex were matched with that of the subjects in the study group. Following instruments were applied to the subjects and/or their parents/teachers to collect data: socio-demographic questionnaire, Tic Severity Scale, Rosenberg Self Esteem Scale (RSS), Pediatric Quality of Life Inventory, Screen for Child Anxiety Related Emotional Disorder (SCARED), the Children's Depression Inventory (CDI), Maudsley Obsessive Compulsive Inventory (MOCI).

Results: The quality of life of the study group was significantly lower than that of the control group in all domains for both children and adolescents except in child reported emotional functioning and social functioning domains. Tic disorder group had a statistically significant lower self esteem than the control group. There were significant differences in the mean CDI, MOCI and RSS scores between the tic and the control group. No difference was found in life qualities between patients with TS and CTD. A negative correlation was observed between the life quality scores and the SCARED scores.

Conclusions: In this study youths with tics reported more distress and functional impairment than others with no psychiatric or severe medical disease. Clinically, an integrated approach that considers other psychiatric symptoms as parts of the disorder could be

beneficial to raise the quality of life and self esteem in children and adolescents with TS and CTD.

P24-03 The role of frontostriatal circuits in persons with tourette syndrome

Mazzone, Luigi

University of Catania, Pediatrics, Italy

The frontal cortex plays a central role in the development of inhibitory motor control and abnormalities in the structure and function of the prefrontal cortices have recently been detected in subjects with Tourette syndrome (TS). In particular, children with TS have enlarged frontal cortex, whereas adults have reduced frontal volumes (1). In both cases prefrontal volumes correlate inversely with tic severity. This suggests that the enlargement of frontal cortex in children may represent a plastic hypertrophy in response to their frequent need to suppress tics, which is known to activate the frontal cortex robustly. Plastic hypertrophy may thereby enhance inhibitory control over tics. Conversely, smaller prefrontal volumes in Tourette adults is thought to represent a failure of this plastic hypertrophy, limiting inhibitory reserve and requiring an increased magnitude and spatial extent of frontal activation to maintain a comparable level of performance on tasks requiring inhibitory control (2). Consistent with this model of impaired inhibitory control in adults who have persistent symptoms, one prior study reported greater age-related increases in frontal activation during an inhibitory control task in persons with TS (2). Recently, we reported the importance of frontostriatal activity (3) that it is increased in persons with TS during a self regulatory control task (inhibition of eye blinks). Activation of frontostriatal circuits in this population may help to maintain regulatory control over semi-involuntary behaviors.

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P25-01 Investigation of adolescents' Internet use motives

Ceyhan, A. Aykut

University of Anadolu, Guidance and Counseling Psychology, Turkey

Introduction: Adolescents use the internet for various motives or purposes. Adolescents' internet motives are likely to play a determinant role for formation of their problematic internet use. Therefore, investigation of adolescents' internet motives is rather important to understand their behaviors in the internet and to prevent misuse of the Internet.

Aims: The study was carried out to determine the internet motives of adolescents. In addition, the relationships between adolescents'

internet motives and their gender, academic achievement, duration of internet use, locus of control and problematic internet use levels were investigated.

Methods: A total of 351 adolescents participated in the study. The data was collected through Problematic Internet Use Scale, Locus of Control Scale and Information Questionnaire. Adolescents' basic internet motives were grouped by content analysis. The data was analyzed through descriptive statistics and analyses of chi square and variance. **Results:** The findings revealed that adolescents' stated their basic internet motives as obtaining information (18.20%), making chat (17.5%), spending time or due to boredom (17.2%), having fun (16.9%), playing games (11.4%), using for both homework and other activities (10.1%), and doing homework (8.8%), respectively. Moreover, the findings pointed out that female adolescents preferred internet to do homework more while male adolescents preferred the internet to play games more, although the rates of the other internet motives of males and females were parallel. In addition, the adolescents' basic internet motives differed in terms of the duration of internet use, locus of control, and problematic internet use level significantly while there was no significant difference in terms of academic achievement.

Conclusion: The findings point out that the adolescents stated various basic internet motives and "playing games" motive could be an important risk factor for the adolescents' Internet use behavior.

P25-02 Late adolescents' identity experiments on the Internet

Ceyhan, Esra

University of Anadolu, Guidance and Counseling Psychology, Turkey

Introduction: Considering identity development in adolescence, internet use can be an indispensable technological tool because it provides the opportunities to conduct adolescents' identity experiments on the internet. These identity experiments can affect adolescent identity development positively, but also have negative effects. Therefore, adolescents' internet use can turn into the experiences hindering their identity development.

Aims: Determining late adolescents' identity experiments on the internet was aimed in this study. Therefore, the study investigates the late adolescents' proportion of conducting identity experiments and the motives for pretending to be someone else in online identity experiments. In addition, the predictive power of gender, age, duration of internet use and identity status on the motives for experimenting online identity was also examined.

Methods: The study was carried out with freshmen university students. The data were collected by Questionnaire and Extended Objective Measure of Ego Identity Status. For analysis, descriptive statistics and logistic regression analysis were used.

Results and conclusion: The findings revealed that while 62.8% of the late adolescents pretended to be someone else when online, 37.2% of them did not conduct identity experiments on the internet. Considering basic motives of late adolescents for conducting identity experiments on the internet by pretending to be someone else, the level of identity foreclosure status was a significant predictor of the internet use motives such as "feeling less shy", "making new friends" and "representing appearance as she or he wishes". In addition it was found that the duration of internet use was a significant predictor of the motives for "saying more" and communicating more easily. Moreover, gender only predicted the motive for "having a date or relationship". As a result, the results pointed out remarkable results about exploring the nature of identity experiments on the internet.

P25-03**Case report: a case of acquired aphasia due to influenza encephalitis***Chang, Hsueh-Ling; Chou, Chia-Chi*

Chang Gung Memorial Hospital, Department of Psychiatry, Taiwan

Introduction: Influenza A and B viruses are major human pathogens, and most frequently been described as an illness characterized by the abrupt onset of systemic symptoms, such as headache, feverishness, chills, myalgia, or malaise, and accompanying respiratory tract signs, particularly cough and sore throat. In addition to the acute febrile illness, clinical presentation of patient with encephalitis includes: confusion, behavioral abnormalities, altered level of consciousness, and evidence of either focal or diffuse neurologic signs and symptoms.

Case presentation: This 11-year-old boy was quite healthy and had never visited child psychiatric clinic. Patient visited a pediatric clinic with the chief complaint of high fever (39°) for 3 days. Only mild sore throat and slight decrease in appetite and activity was noted then. However, patient was later noted to have conscious loss and drooling for 1–2 s. He was sent to a local hospital where computed tomography of brain was performed, no organic brain lesion was found. At PICU, magnetic resonance imaging study of brain revealed left hippocampus, bilateral thalami, posterior brain stem ill-defined lesion, encephalitis is considered. And the serology anti-Influenza B antibody elevated. In addition, his executive function, attention span, memory, visual motor function all deteriorated after the infection.

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P25-04**Insufficient sleep and suicidality in Korean adolescents***Cho, In Hee; Lee, Yu Jin; Cho, Seong-Jin; Kim, Seog Ju*

Gil Hospital, Gachon University of Medicine and Science, Psychiatry

Objectives: To investigate the association between the behaviorally induced insufficient sleep and suicidality among adolescents.

Methods: 8,530 students (grades 7–11) was recruited and 8,010 students completed all the questionnaires. The survey included Beck's scale for suicide ideation (SSI), the Beck Depression Inventory (BDI), a modified Epworth Sleepiness Scale (ESS) and questionnaires about sleep (weekday/weekend sleep schedule/duration, insomnia and snoring).

Results: Among the study participants, 1,765 subjects (22.03%) were classified as exhibiting behaviorally induced insufficient sleep syndrome (BISS). Adolescents with BISS showed a higher SSI score than those without BISS ($F = 173.00, p < 0.001$). After controlling for age and sex, a longer weekend oversleep and a shorter weekday sleep duration predicted a higher SSI score ($\beta = 0.19, p < 0.001$; $\beta = 0.37, p < 0.001$). The association between weekend oversleep and SSI score remained significant even after BDI and ESS scores and presence of insomnia and snoring were additionally controlled ($\beta = 0.07, p < 0.01$).

Conclusion: BISS was common among Korean adolescents and was also associated with increased suicidal ideation. Weekend oversleep was associated with suicidal ideation independently from depression, daytime sleepiness, snoring and insomnia. Our findings suggest that chronic sleep restriction among adolescents might be one of the risk factor of suicide.

Keywords: Suicidal ideation, adolescent, insufficient sleep

P25-05**Psychopathological continuity/discontinuity in an epidemiological sample of Galician adolescents from general population***Dominguez, Dolores; Mazaira, José*

University of Santiago de Compostela, Psiquiatría, Radiología y Salud Pública, Spain

Objectives: To assess, by a longitudinal study, the existence or inexistence of general psychopathology continuity in a general population sample, representative of Galician adolescents.

Material and methods: In the first phase a sample representative of adolescents from Galician General population is assessed ($n = 2.5009$ by means of a general questionnaire including different variables (sociodemographic data family environment, use of alcohol and drugs). Among these variables the Goldberg GHQ-60 was used as a questionnaire of general psychopathology. Ten years later an at random subsample is studied again ($N = 800$), using the Goldberg GHQ-60 once more as a questionnaire of general psychopathology. Standardized interviews are also made by means of DIS III to all de "GHQ cases" as well as to an at a random subsample of the "non case GHQ" analysing by comparing both of them by the statistic packet SPSS.

Results: The most of the subjects assessed in the third phase by the DIS received at least a diagnosis DSM-III (66.5%) being the most frequent ones Dependence of nicotine (40.6%), Depression/Distimia (26%), Sexual Dysfunction (22%) Anxiety Disorders and Abuse/Dependence of Alcohol (11.5%) A significant association between being GHQ case/no case and the presence of Psychiatric diagnosis assessed by means of the DIS was found (the diagnoses of tobacco dependence was excluded). This association was specially high for the diagnosis of depression. A statistically significant association was also found between being GHQ case/no case in the first phase and getting psychiatric diagnosis by means of the DIS 10 years later mainly on that referring to the diagnoses of depression.

P25-06**Nonpsychotic hallucinations in children***Gorker, Isik*

Trakya University Faculty of Medicine, Child and Adolescent Psychiatry Department, Turkey

Hallucinations are consistently defined as perceptions in the absence of identifiable external stimuli. They have been described in a variety of childhood psychiatric condition. They may also be found in healthy children. Ten cases of children with hallucinations but without psychosis were identified in Child and Adolescent Psychiatry Department. We discussed the clinical features, precipitating factors and treatment process.

P25-07**The patterns of adolescent externalizing symptoms**

Korhonen, Marie-Kaarin¹; Hannula, Ismo²; Salmelin, Raili³; Luoma, Ilona⁴; Tamminen, Tuula⁴

¹University of Tampere/Helsinki University Hospital, Department of Child Psychiatry, Finland; ²University of Tampere, Department of Mathematics and Statistics, Finland; ³University of Tampere, School of Health Sciences, Finland; ⁴University of Tampere/Tampere University Hospital, Department of Child Psychiatry, Finland

Aim: To study the pattern of adolescent self-reported externalizing symptoms from developmental perspective.

Materials: The original sample of first-time pregnant mothers was collected in 1989–1990 from maternity clinics in the city of Tampere, Finland. Follow-up questionnaires were sent to 327 mothers in 2006, and 191 mothers and 192 adolescents responded. Internalizing and Externalizing problems of the adolescents were assessed with the Child Behaviour Checklists (CBCLs) and the Youth Self Report forms (YSRs; Achenbach, 1991). Statistical method used was generalized additive model (GAM) that allows exponential family distributions and non-parametric functions for explanatory variables.

Results: GAM explains 46.6% of the deviance in the data. This study indicates an increase in adolescent self-reported externalizing symptoms, when externalizing symptoms in mothers' reports or internalizing symptoms in adolescent self-reports increase. However, severe internalizing symptoms of the adolescent were associated with less increase in externalizing symptoms in self-reports. Adolescent self-reported externalizing symptoms decreased when internalizing symptoms increased in mothers' reports. Also according to this study the number of children, categorized as one or more, in the family seems to have a protective effect on adolescent outcome on externalizing symptoms.

Conclusions: Results indicate that when internalizing symptoms are severe externalizing symptoms might not increase, perhaps due to poorer functioning level psychologically and in social relations. "Better behaviour" may not always indicate improved mental health status.

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P25-08**The validation for inventory of callous-unemotional traits-Korean version: comparison between normal juveniles and juvenile delinquents**

Kwon, Ji-Eun¹; Kwon, Eun-jeong¹; Song, Hye-Min¹; Oh, Hye-Ji²

¹Chungbuk National University, Department of Psychology;

²Chungbuk National University, Department of Psychology

Emotional characteristic of psychopathy is deficient affective experience, shallow, and callousness, which called CU (Callous-Unemotional) traits. Many previous studies suggest that CU

(Callous-Unemotional) traits foretell the juvenile delinquency problems, the antisocial behavior, crime of adulthood. The purpose of this study is to translate the 24 items Inventory of Callous-Unemotional traits (ICU) into Korean and to examine the reliability and validity of the translated questionnaire. In order to examine this study, the data of 559 adolescents respondents was analysed. The results of factor analysis of the K-ICU revealed a 4-factor structure: callousness, uncaring/stolidity, lack of emotion expression. Cronbach of K-ICU was .732, and reliability of delinquent juveniles group was somewhat low than normal juveniles group. Independent sample t-test was used to test of total ICU and its subfactor scores difference. As a result, there is a significantly difference between the normal juveniles and delinquent juveniles. CU traits correlated significantly with measures of antisocial personality traits, temperament of novelty seeking, hyperactivity, delinquency problem, temperament of reward dependence and temperament of persistence. Results from a stepwise regression analysis with antisocial personality traits and delinquency problem as a dependent variable, CU traits and temperament as a independent variable showed that temperament of novelty seeking, callous factor of ICU was a significant predictors. This study suggesting that influence of CU traits on adolescents antisocial personality traits or delinquency problem, and validity of Korean Inventory of Callous-Unemotional traits.

P25-09**Suicide attempts in adolescence: assessment of personality traits by MMPI-A**

Ledda, Maria Giuseppina; Porcu, Lucia; Piccinu, Maria Piera; Fratta, Anna Lisa

University Hospital of Cagliari, Child and Adolescent Neuropsychiatry, Italy

Introduction: More than 90% of adolescent who commit suicide is affected by psychiatric disorder. The most significant risk factors for suicide are: major depression, previous suicide attempts, mania, schizoaffective disorder, substance abuse and borderline disorder (JAACAP 2001;40 (S7):24–51). In this study we analyzed the presence of traits of axis II psychopathology in adolescents who committed suicidal attempt and did not meet criteria of axis I psychopathology.

Methods: Twenty-three adolescents (18 females and 5 males) were admitted between 2002 and 2010 for suicidal attempt. They did not meet criteria of axis I psychopathology. They were assessed with the Minnesota Multiphasic Personality Inventory for Adolescents (MMPI-A).

Results: MMPI-A showed pathological scores in the following scales: negative treatment indicators in 56.5% of cases, paranoia in 52.2%, conduct problems in 52.2%, low-self-esteem in 47.8%, anger in 47.8%, alienation in 47.8%, psychopathic deviation in 43.5%. On Axis IV, high scores in social discomfort scale were found in 47.8% of cases and in family problems scale in 43.5%.

Conclusion: This study with MMPI-A shows axis II and IV factors involved in suicidal behaviour in absence of axis I disorders. The early identification of these factors may be useful in order to address early intervention in suicidality prevention.

P25-10

Psychosocial factors associated with becoming a young father in the Finnish general population

*Lehti, Venla*¹; *Sourander, Andre*¹; *Sillanmäki, Lauri*¹; *Helenius, Hans*²; *Tamminen, Tuula*³; *Kumpulainen, Kirsti*⁴; *Almqvist, Fredrik*⁵

¹University of Turku, Department of Child Psychiatry, Finland;

²University of Turku, Department of Biostatistics, Finland;

³University of Tampere, Department of Child Psychiatry, Finland;

⁴University of Eastern Finland, Department of Child Psychiatry,

Finland; ⁵University of Helsinki, Department of Child Psychiatry, Finland

Background: It has been shown that there are psychosocial factors which are associated with becoming a young parent. Most previous studies, however, have focused on mothers. Furthermore, many studies on young fathers have been based on high-risk samples and suffered from other methodological limitations. The aim of the current longitudinal study was to examine the association of both childhood and adolescent psychosocial factors with becoming a young father in a large, nationally representative sample of Finnish boys.

Methods: The baseline assessment in 1989 included 2,946 boys born in 1981. Information about psychiatric symptoms at age eight was collected with Rutter questionnaires from parents and teachers and with the Child Depression Inventory from the children themselves. Information about psychiatric symptoms and substance use at age 18 was based on self-reports, and data on criminal offenses at age 16–20 was collected from a police register. Register-based follow-up data on becoming a father under the age of 22 was available for 2,721 boys. Logistic regression analysis was used to examine the associations of psychosocial factors in childhood and adolescence with becoming a young father.

Results: The factors measured at age eight, which were associated with becoming a young father independently of adolescent factors, were conduct problems and having a mother with a low educational level. The factors measured at age 16–20, which were associated with becoming a young father independently of childhood factors, were regular smoking and having repeatedly committed criminal offenses.

Conclusions: Many of the childhood and adolescent factors associated with becoming a young father reflect antisocial tendencies and they should be taken into consideration when designing preventive or supportive interventions.

P25-11

Evaluation of the effects of psychiatric family rehabilitation for children and adolescents

*Lehtoranta, Pirjo*¹; *Linnakangas, Ritva*²; *Järvikoski, Aila*²; *Suikkanen, Asko*²

¹Rehabilitation Foundation, Finland; ²University of Lapland, Finland

About one-fifth of Finnish children suffer from some degree of mental disorder or disturbance. The Social Insurance Institution of Finland strove to respond to this challenge by introducing psychiatric family rehabilitation for children and adolescents. We carried out an external evaluation of this family rehabilitation 2005–2009. Our objective was to evaluate the rehabilitation and to analyze which factors predicted

positive changes in the children or benefits given by rehabilitation for families.

A total of 1,514 children and their parents took part in the rehabilitation. Data was gathered by questionnaires from the children, their parents, the rehabilitation projects and organizations that referred the children to rehabilitation. The data was collected at the beginning and at the end of the rehabilitation. Using the questionnaire data we constructed the before and after rehabilitation SDQ scores for the respondents. We analyzed the data using logistic regression.

According to the parents' reports, the symptoms decreased in nearly two out of three children. The parents' concern over the wellbeing of their child, the more severe symptoms, the family coherence, and the duration of rehabilitation predicted the symptom reduction. The parents' perception of having gained resources from rehabilitation is predicted by the duration of rehabilitation, the form of rehabilitation focusing on family therapy and group activity, and by the social support received from the family and acquaintances. The children's perception of having gained help from rehabilitation was predicted by the duration of rehabilitation, the form of rehabilitation focusing on individual and family-oriented rehabilitation and by the resources the parents received from rehabilitation. The problems of children and families varied greatly; this emphasizes the need for individualized rehabilitation programs and network-oriented approaches, which may give needed support both to children and the families.

P25-12

Mother's personality and infant temperament

Marques, Mariana; Macedo, António; Bos, Sandra; Maia, Berta; Pereira, Ana Telma; Soares, Maria João; Azevedo, Maria Helena

University of Coimbra, Faculty of Medicine, Portugal

Aims: We examined if perfectionism and the perception of being anxious were associated with more negative mother's infant temperament ratings.

Methods: 386 women in their last trimester of pregnancy completed the Multidimensional Perfectionism Scale (MPS), the Beck Depression Inventory-II (BDI-II) and an item about their perception of being anxious. The Portuguese version of the Diagnostic Interview for Genetic Studies and the Operational Criteria Checklist for Psychotic Illness were used to generate diagnoses (DSM-IV/ICD-10). After delivery, women completed the Difficult Infant Temperament Questionnaire (DITQ) and the BDI-II and were interviewed with the DIGS. Women with depression and probable cases (cut-offs adjusted to Portuguese prevalence/BDI-II), were excluded.

Results: The DITQ has factorial validity and internal consistency. Perfectionism total scale score and item 6/DITQ ("is your baby irritable or fussy?") were positively correlated. Self Oriented Perfectionism (SOP) in pregnancy and the same item were negatively correlated. Women with low SOP differed from those with medium and high SOP in the total DITQ score. The low SOP group differed from the medium group on items 3 and 4 scores. There were no significant associations with Socially Prescribed Perfectionism. There was an association between anxiety trait status and scoring low, medium or high in the DITQ. SOP (low vs. medium/high) showed to be a significant predictor of total DITQ score and item 3 and 4 scores but trait anxiety as not a predictor total DITQ score.

Conclusions: Higher levels of adaptive perfectionism (SOP) are associated (and predict) with a less negative view of infant's temperament. Some positive perfectionism features could be used to enhance women's self-efficacy/parental competence and positive

affect towards the infants. Antenatal interventions to minimise anxiety can help optimize infant temperament outcomes, leading to maternal and infant mental health better outcomes.

P25-13

Advanced paternal age at birth, assisted reproduction, and delayed language development: the HBC Study

Matsumoto, Kaori; Tsuchiya, Kenji; Nakamura, Yuki; Itoh, Hiroaki; Takei, Nori

Hamamatsu Univ School of Medicine, Japan

Background: Advanced paternal age at birth maybe associated with delayed language development and autism spectrum disorders in the offspring (Saha et al., 2009; Hultman et al., 2010). Assisted reproductive technologies (ART) can be a candidate account for this association (Zhu et al., 2009; Hvidtj^orn et al., 2010), since use of ART is usually accompanied by delayed conception and thus by advanced age of the couples (Ford et al., 2000).

Aim: To examine whether advanced paternal age is associated with delayed language development, and whether the association, if any, is accounted for by the use of artificial reproductive technique.

Methods: The participants are 14-month-old infants and the mother, who had been longitudinally followed before the delivery, in the Hamamatsu Birth Cohort for Mothers and Children (HBC). Language development of the participating infants was assessed at the 1st, 4th, 6th, 10th and 14th months using Receptive Language Score and Expressive Language Score in the Mullen Scales of Early Learning (Mullen, 1995). Demographic variables including parental age were also collected. Pregnancy and obstetric information was collected from the participating mothers during their pregnancy and from hospital data.

Results: 149 mother and infant dyads participated in this study. Mean scores of receptive language at 14th month were significantly lower in infants with father's age at birth 35 years and 25–34 years compared to infants with paternal age at birth <25 years. This association was not accounted for by other demographic factors. ART partly accounted for this association, although the association between advanced paternal age at birth and lower score in receptive language remained significant after controlling for ART in the multivariate analysis.

Conclusion: Paternal age at birth increase risk for delay in language development. This association was accounted for partly by use of assisted reproduction.

P25-14

Non psychotic auditory hallucinations by children. About 20 cases

Merat, Yves-Marie¹; Michel, Julie²

¹Université de Sherbrooke, pédopsychiatrie, Canada; ²Universite de Sherbrooke, CHUS pedopsychiatrie, Canada

Objective: Confirm the non psychotic nature of the auditory hallucinations in the 20 children of the group. -propose adequate procedure fore adequate care giving.

Methods: Based on 20 cases the authors verify: -the actual existence of auditory hallucinations. The absence of any psychotic symptoms. The psychopathological context. -the conditions under which the hallucinations appear. The evolution with respect to psychodynamic and neuro physiologic hypothesis.

Results: The psychodynamic psychotherapy addressed to the psychopathological context gives favorable results in 15 out of the 20 cases. These results conform to our literature review. The use of psychotropic drugs on psychopathological context was useful in 6 cases. The use of psychotropic drugs as an answer to the hallucination symptoms was not necessary. Taking into consideration the anxiety of the child's surroundings (in reaction to hallucinations) provided a favorable support.

Conclusions: Non-psychotic auditory hallucinations are more frequent in children than generally described. It is highly recommended to look out for this symptom systematically. The appeasement of the anxiety in the child's surroundings along with the psychodynamic psychotherapy are effective solutions to ensure the recovery. A longitudinal study would be necessary to confirm such current favorable results on a long term basis.

P25-15

Correlation between theory of mind (Intentionality) and language in normal children

Mohammadzadeh, Azar¹; Tehrani-Doost, Mehdi²; Khorrami, Anahita¹

¹Institute for cognitive science studies, Islamic Republic of Iran;

²Institute for Cognitive Science Studies/Tehran University of Medical Science, Islamic Republic of Iran

Introduction: Theory of mind has been described as the ability to understand others' mental states. One of the main aspects of theory of mind is intentionality which refers to people's intentions in their behaviors. Numerous studies have investigated the relation between language ability and theory of mind. The aim of this study is to investigate relation between theory of mind (intentionality) and language ability using movement shapes paradigm.

Methods: sixty boys age 7–9 without any mental disorders based on interviewing with their parents participated in this study. All participants were assessed using the modified version of Moving Shapes Paradigm. All animations were presented between 34 and 45 s. Then participants were asked to describe the movements of triangles according to what they understand in terms of actions, interactions, and mental states. Children's descriptions were rated according to their answers accuracy, type of applying descriptions, using of mental states and emotional words, and length of phrase. The scoring reflects the degree of intentionality. Verbal and languages ability was measured by verbal subtests of the Wechsler Intelligence Scale for Children (WACIS-R).

Results: Data analysis shows that there are no significant relations between TOM and language ability ($P > 0.05$). Correlations between intentionality score, answer accuracy, and length of answers from TOM tasks and total verbal IQ were $r = 0.21$, $r = 0.16$, $r = -0.1$ respectively.

Conclusion: It could be concluded that theory of mind which measured by Movement Shapes Paradigm is not related to language ability. Therefore while assessing theory of mind the animation

paradigms which are free of language is better in children who have some deficits in their language development.

Keywords: Theory of mind, Intentionality, language, Verbal ability, Movement shape paradigm.

P25-16

Childhood predictors of military fitness: a prospective, community-based, follow-up study from age 8 to age 18

Multimäki, Petteri¹; Sourander, Andre¹; Parkkola, Kai²

¹University of Turku, Finland; ²Finnish Naval Headquarters, Finland

Background: Military service affects millions of young men worldwide. For many, military service remains a positive thing in their lives. For some, however, the experience of military service is far from the “best days of their lives.” Knowledge of the impact of childhood psychosocial problems on success in military service is scarce.

Aim: The purpose of the study was to assess whether childhood psychosocial problems are associated with suitability for military service.

Materials and methods: The subjects were 2,622 Finnish boys born in 1981. They were first assessed with the Rutter parent and teacher questionnaires and self-reports (Children’s Depression Inventory) at age 8. Their suitability for military service was assessed at age 18.

Results: A wide range of childhood problems, especially internalizing disorders, predicted release from military service. All informants had predictive association with later suitability for military service. The majority of children with psychiatric problems were later estimated to be fit for military service.

Conclusions: The results show a predictive association between childhood psychiatric problems and early adult psychosocial impairment, as estimated by the ability to serve in the military forces.

P25-17

Mental development and allied congenital malformations—case report

Radivojevic, Dragana¹; Medic, Tatjana²; Suzovic, Vesna³

¹Primary Health Care Center Zemun, Department for Developmental Consultancy, Serbia; ²Clinical Centre of Serbia, Serbia; ³Primary Health Care Center Zemun, Department for Mental Health, Serbia

The aim of this paper is to pay attention to all profiles in medical experts in prenatal diagnosis on frequent of those malformations. Our patient is boy, 2 5/12 years old, registered and observed in the Developmental Consultancy in “Zemun’s Health Center” from birth (risk gravity—mother has a Chron disease). He was born with spine bifida opened (operated in first day of living) and hydrocephalus (operated in third day—V-P shunt). Neurological disorders were presented by flaccid paraparesis. MR findings demonstrated LS abnormalities—meningomyelocele. After intensive physical therapy (thermo, electro, kinesio), he can stand and side walk with support. In mental development he was significantly late, what seems like sequel from the basic disease. As he, also, suffered from serious dysphasia, we did routine examinations and we have find auditory nerve lesion bill. After application a hearing aid, he starts to speak, to learn easily, to smile, so his mental health has become normal. In our

Developmental Consultancy this boy is constantly observed and treated in his best interest.

P25-18

Sense of coherence and criminal offences among young males. Findings from the Finnish 1981 Nationwide Birth Cohort Follow-Up Study

Ristkari, Terja¹; Sourander, Andre¹; Rønning, John A.²; Elonheimo, Henrik³; Helenius, Hans⁴

¹University of Turku, Department of Child Psychiatry, Finland;

²University of Tromsø, Department of Pediatrics, Norway;

³University of Turku, Department of Criminology, Finland;

⁴University of Turku, Department of Biostatistics, Finland

Background: Sense of coherence (SOC), the central concept of a salutogenic model, was presented and described by Aaron Antonovsky (1979). The salutogenic model stresses positive aspects and resources of health rather than symptoms and diseases. Furthermore, the salutogenic model interprets health and illness as two poles on a continuum, instead of seeing health and disease in opposition to each other.

Aims: The aim is to study associations between sense of coherence (SOC), and criminality among young males. The sample included 2314 males born 1981. Information about self-reports of SOC was obtained from obligatory military call-up. Information about criminality was obtained from the Finnish National Police Register.

Results: Self-reported poor SOC was associated with all specific crime types. Poor SOC was especially associated with high level of criminal offences.

Conclusions: The study shows the sensitivity of the SOC-13 scale to antisocial and rule-breaking behavior.

P25-19

Suicidal behavior among Arab adolescents at risk in Israel and it’s perception as a mean of expressing distress and as a help seeking technique

Shefler, Nomi¹; Apter, Alan²; Strenger, Carlo³; Feldman, Dana⁴

¹Tel Aviv University, Department of Psychology, Israel; ²Department of Psychological Medicine Schneider Children’s Medical Center of Israel, Israel; ³Department of Psychology, Tel Aviv University, Israel; ⁴Department of Psychology, Bar-Ilan University, Israel

Background: Suicide is one of the most common causes of death in adolescence around the world. In Israel, suicide among Arab adolescents is an issue that has not been investigated enough. Although studies indicate that suicide is less common in this population, suicidal behaviors among Arab adolescents are more common in the last years.

Aims: In this study we aim to evaluate the differences between Arab and Jewish adolescents in regard to their help-seeking techniques and their attitudes toward suicide. We shall also investigate the hypothesis claiming that because of the differences between the populations, the correlation between the severity of psychopathology and suicidal behaviors in the Arab population will be lower.

Method: 12 high-schools from Jewish and Arab cities in Israel were randomly chosen. 1200 pupils completed self-report questionnaires regarding suicide ideations and attempts (Paykel Suicide Scale), psychopathology (SDQ; BDI; Zung Anxiety Scale), socio-demographic background, help seeking techniques and attitudes toward suicide. For clinical considerations, all questionnaires were screened for severe suicidal behaviors and those subjects were interviewed by school counselor.

Preliminary results: 15.7% of the Arab adolescents, in compare with 5.1% of the Jewish adolescents, reported they either thought about suicide during the past 2 weeks before the survey or had a suicide plan. Although the Arab adolescents were only 44.7% of the participants, 67% of the participants who reported that they attempted suicide were Arabs.

Conclusions: Hopefully this research will elucidate the unique patterns which lead to suicidal behaviors that have been found as rising among Arab adolescents. Identifying these patterns is a basic step for establishing new strategies of preventing suicidal behaviors in this population.

P25-20

Near Infrared Imaging, a tool to study emotional processing in infant's brain

Shekhar, Shashank¹; Huotilainen, Minna²; Nissilä, Ilkka³; Karlsson, Hasse¹

¹University of Turku, Department of Clinical Sciences, Finland;

²University of Helsinki, Finnish Institute of Occupational Health, Finland; ³Aalto University, School of Science, Department of Biomedical Engineering and Computati, Finland

Background: In humans, little is known so far about the mechanisms by which environmental factors modulate the functioning of systems that regulate stress and emotion, and how all this is linked to brain development and behavior or to the later emergence of psychiatric or somatic illness. As a subset of FinnBrain (<http://www.finnbrain.fi>), a large ongoing birth cohort study, our aim is to use a noninvasive technique, Near Infrared Spectroscopy (NIRS), to study the effect of psychosocial factors affecting the developing brain in a pediatric population. Numerous research works have been done with NIRS in last decade in adults (1) and children (2). However, only a few studies related to emotional processing has been carried out in children (3) so far.

Aim: To recognize the bilateral activation in different regions of the brain in response to emotional auditory stimuli.

Material and methods: The data from NIRS will be recorded from different positions on both hemispheres simultaneously with electrooculography, electrocardiography, pulse oximetry, and inclinometry. A small group of healthy infants (3 months age) from depressed mothers and control infants from healthy mothers will be given emotional auditory stimuli in a box of 10 s. Normal statistical tests will be applied to compare the results.

Expected Results: We will observe hemodynamic changes in specific brain regions in response to stimuli. Note: The results of pilot study will be presented at the congress.

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P25-21

The Strengths and Difficulties Questionnaire (SDQ): what kinds of problems predict self-, parent- and teacher reported impact score?

Sørheim Nilsen, Toril¹; Eisemann, Martin¹; Kvernmo, Siv²

¹University of Tromsø, Department of Psychology, Norway;

²University of Tromsø, Norway

Background: The impact supplement of the Strengths and Difficulties Questionnaire (SDQ) has been shown to be superior to the questionnaires symptom scores in predicting psychiatric caseness (Goodman 1999). When assessing child- and adolescents' mental health it is important to obtain information from different persons familiar with the child's situation (Barbosa, Tannock et al. 2002).

Aim(s): As part of a larger multicenter study of three outpatient child and adolescent mental health clinics (CAMHS) in Northern-Norway, the aim of the present study is to examine what kinds of problems predict the self-, parent- and teacher reported impact score of the SDQ.

Methods and material: The SDQ is a brief, behavioural screening instrument for 3–16 years old. SDQ screening by self-report (N = 136), mother-report (N = 109), father-report (N = 66) was obtained at intake, and from the main teacher (N = 46) and additional teacher (N = 66) during the assessment course. The youths in this study were between the ages of 11 and 18 years.

Results: Preliminary results indicate that hyperactivity/attention problems are strong predictors for perceptions of the impact of difficulties for all informants. For the youths themselves and for parents, having problem with peers seems to be important when assessing the impact of difficulties. Emotional difficulties emerge as the strongest predictor for parents impact score, but not for youth themselves. In school, hyperactivity/attention problems are most predictive of the impact score, followed by emotional difficulties. Further analysis of the data is necessary in order to obtain more differentiated information about the research questions.

Conclusions: For the different informants, a few specific aspects of child and youth difficulties seem to influence the perception of problem impact. Also some problem dimensions seem more predictive of the impact score across informants. The results of additional analysis will be presented.

P25-22

Dissociative tendency, anger expression and frontal activation during verbal fluency task

Uehara, Toru¹; Ishige, Yoko²; Suda, Masashi³

¹Gunma University, General Health support Center, Japan; ²Gunma University Graduate School of Medicine, Neuropsychiatry, Japan;

³Gunma University, Japan

Background: Brain mechanisms underlying dissociation or impulsivity have been a focus of research in adolescent mental health. Functional imaging studies have shown an association of both behaviors with frontal functioning.

Methods: We investigated frontal lobe activation during word productions using 16-channel near infrared spectroscopy (NIRS), and examined correlations between relative changes in cerebral blood volume and behaviors according to the state-trait anger expression

inventory (STAXI-1) and the adolescent dissociative experience scale (ADES) in 44 healthy university students (mean age 20.2 years; 29 females). In addition, we compared frontal activations by dissociation levels. All subjects gave written informed consent according to the provisions of the Declaration of Helsinki revised in Edinburgh in 2000. We strictly protected privacy, and anonymity was carefully preserved.

Results: Verbal fluency provided widespread and gradual frontal activations in general, and significant differences in activations were noted in the right prefrontal cortex (PFC), lower in ch1, 2 and 7 (dorsolateral to the ventral portion), and higher in ch13 and lower in ch16 (left PFC) with stronger dissociation tendencies. Total ADES and Anger-in scale (the frequency with which angry feelings are suppressed) of the STAXI correlated significantly and negatively with frontal pole activation (ch8).

Conclusions: Differences in frontal activation suggest that dissociation might be related to the PFC. The present study also suggests that lack of anger suppression could be associated with stronger rostral PFC activation.

P25-23

Framework for an integrative multidimensional neuropsychiatric assessment (FIMNA)

Westerinen, Hannu

University of Helsinki, Clinic of Child Psychiatry, Finland

Background: Children with neuropsychiatric problems go often through repeated assessments by a number of professionals and they receive treatments and rehabilitation during many years. This brings up several challenges regarding the current assessment: how to analyze and evaluate the work done previously by other professionals, how to guarantee that all important fields are systematically included and integrated, and how to convey the professional view in an understandable and clear form to the family and other parties, who help the family. The common documentation format in health care does not support in a best way to reach these goals.

Development process: In Helsinki University Hospital Child Neuropsychiatric Unit we have strived to respond to the challenges. During the past 2 years we have developed an integrative model to structure comprehensive assessment of the child, family and their environment. This work has been a developmental process performed alongside the normal clinical work, in team sessions and in work with families.

Results: At this point we have three instruments in use. **Model of 24 circles** presents systematically all the important fields of evaluation in a graphical form, which helps to give an integrated and comprehensive image of the child's and family's properties, their history and present interactions. **Three initial questionnaires** are used to survey the family's opinions, where important areas are to be investigated. **Structured summary** is a method to review all the previous assessments and treatments. These instruments help the multiprofessional team to integrate a great amount of information, and they help the family to reach the same goal.

Conclusion: The FIMNA model will be presented in detail.

P25-24

The study on epidemiology of psycho-social disorders in 3–10 years old iranian children

Mirjalili, Faezeh; Rostami, Reza; Piri, Marzieh; Zarei, Jamileh

University of Tehran, psychology, Islamic Republic of Iran

Introduction: Psycho-social development is one of the most important fields in children psychiatry. Many children experience psychological problems, and it has a deep negative influence on their development and functions.

Purpose: The purpose of this study was the investigation of psycho-social disorders in iranian children.

Methods: 410 children (200 females, 210 males) between 3 and 10 selected randomly. the parents of this children answered to pictorial pediatric symptom checklist (PPSC).

Results: The emotional disorders is relatively high in iranian children. in addition, there was a significant relationship between demographic characteristics and psycho-social disorders in children.

Keywords: PPSC, Iranian children, psycho-social disorders.

P25-25

Comparison of social adjustment in mothers of children with cancer and mothers with healthy children

Dehghani, Mohammad Ali; Ahmadi N; Dehghan A; Nazmiya H; Mirjalili M; Dehghani H; Askari A; Zaeralhosaini B; Taheri M

SSU.AC.IR, Islamic Republic of Iran

Introduction: Mothers with disabled children and mental stress and crises are unable to compromise the child been given and their physical and mental health threatens This study has been developed compared social adjustment of mothers of children with cancer and mothers of healthy children.

Methods: This research is a study case-control in an analytic way. 46 mothers (composed of 23 mothers having cancer retarded children and 23 mothers having normal children) were selected randomly. The data collected was demographic and social adjustment scale of Bell. This is a semi-structured interview which investigates social adjustment in five main areas.

Results: The result showed that there is a significant difference between social adjustment in mothers of children with cancer and mothers of healthy children.

Conclusions: The results showed that the social adjustment in mothers of children with cancer is less than mothers of healthy children.

Keywords: Social adjustment- cancer- healthy children.

P25-27

Prevalence of catatonia among adolescents treated with ECT

Ghaziuddin, Neera

University of Michigan, Ann Arbor, USA

Aim: To identify catatonia, using DSM-IV criteria, among a group of hospitalized adolescents (<18 years) who were treated with electroconvulsive therapy (ECT).

Methods: Retrospective data analysis of patients treated with ECT between January 1989 and July 2008.

Results: A total of forty nine adolescents were identified who had received ECT. A sub-group of fifteen (31%) met investigator-based criteria for catatonia. Mean age of the catatonic cases was 15.9 years old (SD = 1.4); there were 9 males and 6 females. The majority (93%) were given 3 or more axis I diagnoses. Suicide attempts were rare. Ten (67%) catatonic patients were diagnosed as such by the treatment team. In five

patients (33%) the diagnosis of catatonia was missed. All missed cases were males ($p = .04$) with high rates of pervasive development disorder (PDD; 60% versus 20%, $p = \text{NS}$). Missed cases had received a higher number of past medication trials ($p = .01$).

Conclusion: Almost a third among 49 adolescents treated with ECT met criteria for catatonia. The majority suffered from intellectual disability, had received multiple medication trials and previous hospitalizations. Catatonia was more likely to be missed among males with PDD, who had received a higher number of psychotropic medications. Benzodiazepines were rarely used. Larger, prospective studies are essential to recognize the frequency of this condition and to optimize treatment.

P25-29

Childhood catatonia in historical perspective

Shorter, Edward

University of Toronto, Canada

Before Karl Kahlbaum proposed the diagnosis of adult catatonia as a separate illness in 1874, the symptoms of pediatric catatonia were conceived nosologically as evidence of “catalepsy” or “melanchia attonita.” Childhood catatonia disappeared, however, with the popularization of Emil Kraepelin’s diagnosis of dementia praecox (that Eugen Bleuler transposed as “schizophrenia”) in the first two decades of the twentieth century. For authors in those years, catatonia existed only as a manifestation of an underlying schizophrenic process, a tendency reinforced in August Homburger’s 1926 founding text of the study of pediatric psychiatry. In 1943, Leo Kanner’s description of “autistic disturbances” in children, which marks the birth of autism as a diagnosis distinct from the childhood schizophrenias, lists many catatonic symptoms but only as part of the newly coined autism. An exception is the work of Karl Leonhard (1960) who proposed that much childhood “schizophrenia” is in fact catatonia. As adult catatonia started to become seen as a diagnosis independent of schizophrenia, especially with MA Taylor and RA Abrams (1975), interest has increased in the demarcation of pediatric catatonia from autism and other pediatric conditions and the systematic treatment of childhood catatonia with ECT and benzodiazepines.

P25-30

Catatonia in adolescence: diagnostic and therapeutic pitfalls

Spysschaert, Yves¹; Sienaert, Pascal²

¹University Psychiatric Center-Catholic University Leuven, campus Kortenberg, Belgium, Belgium; ²University Psychiatric Center-Catholic University Leuven, campus Kortenberg, Belgium

Catatonia is a unique psychomotor syndrome associated with a variety of psychiatric and medical conditions, that also occurs in children and adolescents where its recognition and treatment present a special challenge. We illustrate several pitfalls in a case-presentation of a 16-year-old Brazilian boy who was admitted to a third-line child psychiatry unit. Shortly after immigrating with his family to Belgium, he developed repetitive tic-like motor abnormalities, denudation and mutism (video). The initial diagnosis was reactive psychosis. His

medical work-up was negative. The patient was started on olanzapine. Catatonia was diagnosed after 2 weeks as negativism, waxy flexibility, palilalia, stereotypies and mannerisms remained unabated. Lorazepam was added in increasing doses, up to 20 mg/day, with partial resolution of catatonia. A trial of ECT was discussed with the parents but not done as symptoms eventually resolved. Diagnostic delays due to clinicians’ unfamiliarity with catatonia, poor acceptance of the diagnosis and treatment by parents, unspecified risks of worsening catatonia by the use of antipsychotics, off-label use of higher doses of benzodiazepines in minors, stigma and controversies surrounding ECT, legal and ethical barriers all present great challenges in pediatric catatonia. Some remedial actions are offered.

P25-31

Bibliometric assessment of publication output of child and adolescent psychiatric/psychological affiliations worldwide between 2005 and 2009

Albayrak, Özgür; Föcker, Manuel; Hebebrand, Johannes

LVR Klinikum Essen, University of Duisburg-Essen, Dept. of Child and Adolescent Psychiatry, Germany

Objective: To determine the quantitative scientific publication output of child and adolescent psychiatric/psychological affiliations worldwide during 2005–2009 and the respective bibliometric qualitative evaluation for 2009.

Methods: We performed citation search in “PubMed”. We counted the total number of publications and differentiated between original research articles and other categories. For the qualitative analysis we related the cumulative impact factor scores to the gross domestic product and the number of inhabitants of each country, respectively.

Results: 60% of the publications between 2005 and 2009 originated from European countries and 27% from the United States of America (USA). The highest cumulative impact factor score was achieved by the USA followed by Germany. After adjustment for gross domestic product and population size, the ranking positions changed in favour of smaller countries as the Netherlands, Norway, Finland, Switzerland and Sweden.

Conclusion: USA is the leading country in regard to qualitative publication measures such as cumulative impact factor score. European countries such as Germany, The Netherlands, UK or France have become increasingly more important for the scientific output between 2005 and 2009. Furthermore, our data indicates a sharp difference between countries with a high versus low gross domestic product with regard to scientific activities in child and adolescent psychiatry/psychology.

P25-33

Reaction of autonomic nervous system indicating affective state while listening music and by mental stress

Barth, Gottfried Maria¹; Mack, Anja-Maria²; Horwath, Daniela²; Weichhold, Yvonne²; Lesnik, Timo²

¹University of Tübingen, Child and Adolescent Psychiatry, Germany;

²University of Tübingen, Germany

Theme: There are close connections between affective modulation and autonomous nervous system. Therefore measurement of sympathetic and parasympathetic excitation state by analyzing heart rate variability could help to understand the psychic condition of child and adolescent patients by an objective and non-invasive probe.

Method: Long term ECG Monitoring was applied to Patients of Child Cardiology and Adolescent Psychiatry. Analyzing Heart Rate Variability could demonstrate parasympathetic and sympathetic reactions and interindividual differences.

Results: Patients with mental stress showed reduced parasympathetic tone, e.g. in deep sleep. Medication could also alternate parasympathetic function. In contrast listening to music overall stimulated parasympathetic nervous system.

Conclusion: Analyzing Heart Rate Variability can provide an objective measure of affective state and its alteration by mental stress. From this follows, that HRV could demonstrate results of psychotherapy independent of the problems of subjective (mis-)estimation.

P25-34

Technology and mind and misanthropy: a case of adolescent girl with schizoid personality disorder

Fanaj, Naim

Main Health Family Center, Mental Health Unit for Children and Adolescents, KOSOVO

Background: Cyber-psychotherapy now is not rare. Still undefined and not well-structured it can be imposed unavoidable on our practice.

Aim: To show psychological portrait and working experience through the internet (facebook and msn) with a case with schizoid personality disorder; as a one proof of online psychological interventions.

Materials and methodology: It is a case study linear-analytic type which is describing flow of evaluation and treatment of at least 6 months work with the case. There were analyzed posts on the facebook, MSN conversations, questionnaires filled out (BDI;IIP-25;FF Model Form;SDQ etc.) and direct meetings face-2-face.

Results: Portrait TMM: the case is almost 18 years old; self called misanthrope, selfish-disease and robot; atheist; does not need feelings; in the life anything does not have values except PC, books and TV; surrounding peoples are slater; ignoring; does not ask/accept help from anyone (“people leave me alone”); often with emptiness (“whom am I?” “Nothing makes a sense”—the death is for her best choice); “but I would like to change the world and if I die—I will not make it”; sometimes exhausted by the boil of thoughts.

Questionnaires: All criteria’s of Schizoid Personality disorder are present; depressive (BDI = 49). Cyber-psychotherapy:FB was her diary; conversations on the MSN were intensive –almost daily. On such a way, internet becomes a battlefield of explorations (dreams, events, moods, thoughts) and interventions. Face-2-face meetings have been started later and less voluminous comparing to the internet.

Conclusions: Circumstances (inability for the direct meetings, suicide urgency, specific traits of several disorders, etc.) have made unavoidable online approach. Online psychological interventions had positive effects: relief of a depression (from BDI = 49 to 23), improvement of neuroticism (according to the FF model), thinning and decreasing of the emptiness feelings and improved sociability (according to IIP 25).

P25-35

Factor structure of boredom in Iranian adolescents

Farhadi, Ali¹; Pouretemad, Hamid Reza²; Asgari, Ali³; Khoshabi, Katoyon⁴

¹Lorestan University of Medical Sciences, Social Medicine, Assistant Prof., Islamic Republic of Iran; ²Shahid Behshti University, Psychology, Associated Prof., Islamic Republic of Iran; ³Tehran University, Educational Sciences, Assistant Prof, Islamic Republic of Iran; ⁴University of Social Welfare and Rehabilitation Sciences, Psychiatry, Associated Prof., Islamic Republic of Iran

Boredom is the mental state, characterized by lack of concentration and motivation to tackle everyday duties, usually associated with depression, anxiety, Inadequate interpersonal relationships, educational decrements and substance abuse. The purpose of this exploratory study was to identify the components and factorial structure of boredom among Iranian adolescents. This study was included two phases. During the first phase, a database was established based on three major sources: theoretical foundations of boredom, measurement scales of boredom available in the literature and interview-based data taken from 50 adolescents (girls = 25 and boys = 25, mean age = 15 years, SD = 2). An eighty-five items questionnaire, entitled: Boredom Assessment Scale (BAS) was developed for the purpose of the second phase. This questionnaire was further applied on 426 adolescents (girls = 227 and boys = 199, mean age = 14.5, SD = 2). Early analyses confirmed validity for 58 items. Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis identified 7 factors in the (BAS): (1) Motivelessness and Purposelessness, (2) Weariness, (3) Negative Thoughts, (4) Acedia and lethargy, (5) Inattentiveness, (6) Anger and (7) Anhedonia. Thus, motivational and emotional aspects of boredom were appeared to be dominant in Iranian adolescents. The results are compared with similar studies in other cultures.

Keywords: Iranian adolescents, boredom, factor structure, exploratory factor analysis and confirmatory factor analysis.

P25-36

A comprehensive model of suicidality and problem behavior theory in adolescence

Feldman, Dana¹; Apter, Alan²; Levi, Yossi³

¹Bar-Ilan University, Department of Psychology; Schneider Children’s Medical Center, Israel; ²Schneider Children’s Medical Center, Department of Psychological Medicine, Israel; ³Ruppin Academic Center, Department of Behavioral Sciences, Israel

Suicide is one of the most important causes of death in adolescence. Various individual risk factors have been identified. However, only few attempts have been made to develop complex theory-based models and evaluate them empirically. According to “Problem Behavior Theory”, “unconventionality” is the underlying factor for different risk behaviors. Since co-occurrence of risk behaviors with suicidal behavior has been found we suggest that “unconventionality” could underlie suicidal behavior as well. Additionally, the role of attitudes towards suicide as facilitator to suicidal behavior has not been fully understood yet.

Aims: This study will endeavor to establish an empirically based, comprehensive model of youth suicidal behavior that comprises

known risk factors for suicidal ideation and behavior and tests the role of unconventionality and attitudes towards suicide as facilitators to suicidal behavior.

Methods: 12 high-schools were randomly chosen from schools throughout Israel. 1200 pupils completed self report questionnaires regarding suicide ideation and attempts (Paykel Suicide Scale), psychopathology (Strengths and Difficulties Questionnaire; Beck Depression Inventory; Zung Anxiety Scale), life styles (Global School-based Student Health Survey), socio-demographic background, non-suicidal self injury, life events and social support. For ethical reasons questionnaires were screened for severe suicidal ideation or behavior and those subjects were interviewed by school counselor.

Preliminary results: 12.1% of students thought about suicide during the past 2 weeks before the survey while 6.8% of students had a suicide plan. 9.7% of students had attempted suicide. 34% of those needed medical care after the attempt and 25.2% of the attempters had made repeated attempts.

Conclusion: Hopefully this model will improve our understanding of the highly complex phenomenon of self destruction and lead to improvements in the prevention of suicidal and risky behavior in youth.

P25-38

The condition and the life experience of Unaccompanied Foreign Minors in Italy: the resilience among risk and protective factors

Fratini, Tommaso¹; Bastianoni, Paola²; Zullo, Federico²; Taurino, Alessandro³

¹University of Florence, Department of Educational Sciences, Italy;

²University of Ferrara, Department of Human Sciences, Italy;

³University of Bari, Department of Psychology, Italy

Introduction: The Unaccompanied Foreign Minors (UFMs) are a highly disadvantaged population that calls the response of the operators and the institutions in relation to the rights protection, support and care interventions that must be activated to help it. This paper records the results of an empirical research on the subject of risk and protective factors, based on the analysis of the narrative accounts of a sample of adolescents UFMs. The research assumes as a theoretical background the paradigm of Developmental Psychopathology, that emphasizes the construct of resilience as a concept able to account for people's abilities to resist responding to the difficulties and hardships on the basis of their internal personal resources.

Objectives and methods: The objective of this research is to perform an analysis of risk and protective factors in UFMs through encoding and recognising indicators of such factors in the reports collected. Narrative semistructured interviews were conducted in a sample of 26 UFMs residents in Italy in residential care centers for children in Emilia-Romagna. The accounts, after transcription, underwent an ad hoc content analysis based on a grid of indicators for the detection of risk and protective factors, with particular focus on the construct of resilience.

Results and conclusions: The results outlines a large and very complex overview of the condition and the experience of these subjects, where, inspite the predominant presence of risk factors compared to protective factors, there are a number of indicators of resilience. These indicators seem to be mainly related to motivation to act in relation to a purpose functional to the Self growth, like reaching the host country, or the ability to adapt and tolerate considerable difficulties and hardships, particularly in the risky experience of the

journey, although in the context of a functioning in which there is a certain degree of persecutory experiences and trends towards concrete thinking.

P25-39

Social stress and adolescent risk-reward behavior

Hommer, Rebecca; Crowley, Michael; Chaplin, Tara; Mayes, Linda

Yale University School of Medicine, Yale Child Study Center, USA

Background: Environmental stress and individual differences in emotional reactivity influence decision making and may contribute to adolescent increases in risky behaviors and vulnerability to mood and substance use disorders.

Aims: We employed the Balloon Analogue Risk Task (BART) to study the effects of stress on decision making. We hypothesized that acute stress, as evoked by a social stressor (Trier Social Stress Test, TSST), would be associated with increased risk-taking. Exploratory analyses examined how temperament and environmental factors relate to BART performance and stress susceptibility.

Methods: 23 children (11 male, aged 10–16 years) completed two visits: (1) baseline session of self report questionnaires and BART; (2) stress-induction session and BART. The key dependent measure was the average number of balloon pumps (more pumps, greater risk).

Results: BART performance was highly correlated across visits [$r(21) = 0.854$, $p < 0.001$]. Repeated measures ANOVA showed a main effect of gender, girls more conservative than boys [$F(1,21) = 9.50$, $p = 0.006$], and trends toward a main effect of stress [$F(1,21) = 3.64$, $p = 0.07$] and a visit by age interaction [$F(1,21) = 3.00$, $p = 0.10$], with stress associated with greater risk-taking, especially among older adolescents. Multiple linear regression [$R^2 = 0.46$, $F(5,17) = 2.86$, $p < 0.05$] indicated greater risk-taking under stress is predicted by Perceived Stress Scale ($\beta = 0.51$, $p < 0.05$) and Peer Pressure ($\beta = 0.39$, $p = 0.05$) self-report scores.

Conclusions: Risk behavior as assessed by the BART incorporates trait and state dependent qualities. Increased risk-taking under stressful conditions is related to greater levels of self-reported real-life stress and susceptibility to peer pressure. Recognizing the ways in which individual vulnerabilities to environmental stressors affect decision making may inform our understanding of real-life risky behaviors among adolescents and offer the opportunity to identify children at risk.

P25-40

Responsibilities of human resources managers and generation X in Iranian organization

Jazani, Nasrin

Shahid Beheshti University, Business Administration Head of Department, Islamic Republic of Iran

The purpose of this research is to find out which factors affect productivity of generation X in Iranian Organization and the role of human resources managers in this regard. Main questions are: are there any differences between needs and expectations of generation X with Baby Boomers? What are the needs and expectations of generation X in Iranian organizations? Are human resources managers aware of their needs and expectations in organizations? What mechanism can we use to promote their

productivity? What mechanism can we use to promote their commitment? Population of research were employees aged 30–35. The sample was 485 employees in different organizations in Tehran capital city of Iran. Tools for gathering information were questionnaires and interviews. Findings: Most HRM managers were not familiar with the issue! X generation were aware of quality of life and they wanted recognition and honesty

P25-41

Self injurious behavior among adolescents admitted to the child and adolescent psychiatry outpatient clinic

Zeki, Ayse¹; Unal, Dilek¹; Kara, Mahmut¹; Cakir, Mahmut¹; Simsek, Candan¹; Ersoz Alan, Burcu¹; Kul, Muslum²; Akdemir, Devrim¹; Foto Ozdemir, Dilsad¹; Cuhadaroglu, Fusun¹

¹Hacettepe University Faculty of Medicine, Department of Child and Adolescent Psychiatry, Turkey; ²Umraniye Government Hospital, Department of Child and Adolescent Psychiatry, Turkey

Background: Non-Suicidal Self Injury (NSSI) is intentionally self-inflicted damage to the surface of his or her body, of a sort likely to induce bleeding or bruising or pain, for purposes not socially sanctioned, but performed with the expectation that the injury will lead to only minor or moderate physical harm. NSSI typically starts at adolescence and there is only limited number of studies at adolescent age group.

Objective: The aim of this study is to investigate the developmental and psychosocial factors associated with NSSI among adolescents who were admitted to the child and adolescent psychiatry outpatient clinic.

Material and method: The sample of the study consisted of 49 adolescents with self injurious behavior who were admitted to the Child and Adolescent Psychiatry Outpatient Clinic of Hacettepe University. Brief Symptom Inventory (BSI), Sense of Identity Assessment Form, Rosenberg Self-Esteem Scale and Parental Attitude Scale were used for the assessment. The control group consisted of 48 adolescents from the same age and SES range of the outpatients without NSSI.

Results: Females were over-represented among adolescents with NSSI (79%) compared with controls (57%). The average age at admission to clinic was 14.69 (SD = 1.51) for NNSI group while it was 14.67 (SD = 1.22) for control group. Analyses showed that adolescents with NSSI scored significantly higher on Anxiety, Depression, Somatization, Interpersonal Sensitivity symptom scales and Global Severity Index of BSI. Adolescents with NSSI also had significantly higher rates of conduct disorder and depression.

Conclusion: NSSI is becoming more common mental health problem among adolescents. Due to the risk of high comorbidity with other psychiatric symptoms and disorders clinicians who encounter youth should be vigilant to assess for this behavior who present with mental health issues. The results of this study will be used in further development of future projects regarding NSSI among adolescents.

P25-42

Developmental disorders and bio-psycho-social health

Niemeijer, Martin¹; Baars, Erik²; Hoekman, Joop¹

¹Zonnehuizen Kinder- en Jeugdpsychiatrie, The Netherlands;

²Lectoraat Hogeschool Leiden, The Netherlands

The bio-psycho-social health problems of children with a developmental disorder shows considerable variability. To develop fitting individual treatment programs for these children we developed an assessment tool (IKC) to be used in addition to existing classifications systems such as the DSM-IV. The instrument is based on three domains with physical and psychical symptoms, on cognitive, emotional and conative functioning of the child. A questionnaire with 12 polar items for each domain to be scored on a 7-points scale is completed by caregivers or the parents of the child. A Visual Assessment Scale for each domain is completed by professionals. After some processing, these results yield a personal profile for the child on all three domains of development. In our psychiatric care facility for children and adolescents, IKC assessment is completed for 600 children, with Autism, Attachment disorders, ADHD, McDD and/or mild intellectual disability. A number of detailed results will be discussed. The resulting individual profile can be used to choose the most appropriate treatment and therapies to stimulate the development of the child in the broadest way.

P25-43

Migration and educational attainment and intelligence

Siefen, Rainer¹; Kirkcaldy, Bruce²

¹Ruhr University of Bochum, Pediatrics, Germany; ²International Centre for the Study of Occupational and Mental Health, Düsseldorf, Germany

The impact of migration across countries has been the subject of this exploratory study. Using standardized measures of intelligence for some 55 countries (Lynn and Vanhoven), there was no indication that intelligence per se was significantly related to the percentage of migrants living in a country. A strong and significant series of correlations was observed between IQ ratings across nations and scores on all three domains of educational attainment ($r = 0.74-81$, $p < 0.001$) suggesting that educational performance does reflect genuine differences in psychometric performances of intellectual ability across countries. On the other hand, there were specific significant correlations between migrants across nations and facets of educational “achievement” such as competencies on reading and science (but not for mathematical competence). And these directions and magnitudes of correlations indicate that if anything, countries with a higher percentage of migrants display “higher” educational performance. Socioeconomic analyses had shown significant relationships between the GDP (richness of a nation) and percent migrants ($r = 0.49$, $p < 0.001$), although neither annual economic growth rates nor human development index scores were related to migration rates. Moreover population density (person/square km) was significantly correlated to migration rates, but not density of households (number of person living in a family household). The social implications of these findings are discussed within the framework of cross-cultural differences and educational practices.

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Non-suicidal self injurious behavior in adolescence

Zeki, Ayse; Cuhadaroglu, Fusun

Hacettepe University Faculty of Medicine, Child and Adolescent Psychiatry, Turkey

Background: Non Suicidal Self-injury (NSSI) is purposely inflicting injury that results in immediate tissue damage, done without suicidal intent and not socially sanctioned within one's culture nor for display. NSSI includes, but it is not limited to cutting, pin-scratching, carving, burning, and self-hitting. The most commonly seen types of NSSI are cutting and scratching. NSSI typically starts at adolescence. There have not been many studies that have examined the rate of NSSI and mental-health correlates among community-based youth.

Objective: To determine the prevalence of NSSI and to investigate the factors associated with NSSI among high school students.

Material and method: This is a cross sectional population study. Sample of the study consist of 450 high school students from three regions of different socioeconomic status in Ankara, Turkey. A screening questionnaire for NSSI, the Difficulties in Emotion Regulation Scale, Rosenberg Self-Esteem Scale, Body Attitudes Scale, Ways of Coping Inventory, Adolescent Relationship Questionnaire, State-Trait Anxiety Inventory and Brief Symptom Inventory are used for assessment.

Results: The data will be analyzed according to socioeconomic status, gender and developmental aspects of adolescents. The results of the study will be used in further planning and development of projects regarding NSSI in adolescents.

Background: Non Suicidal Self-injury (NSSI) is purposely inflicting injury that results in immediate tissue damage, done without suicidal intent and not socially sanctioned within one's culture nor for display. NSSI includes, but it is not limited to cutting, pin-scratching, carving, burning, and self-hitting. The most commonly seen types of NSSI are cutting and scratching. NSSI typically starts at adolescence. There have not been many studies that have examined the rate of NSSI and mental-health correlates among community-based youth.

Objective: To measure the characteristics of risk behavior/NSSI and to determine the comorbid clinical diagnoses of NSSI among high school students.

Material and method: From total pool of 450 high school students of three different socioeconomic statuses in Ankara, Turkey, 60 adolescents suffering from self injurious behavior were identified. They invited to clinic for clinical assessment. Adolescents who screened positive for NSSI and their age and gender matched controls formed case and control groups of the study. Kiddie-Schedule for Affective Disorders and Schizophrenia-Present and Lifetime Version (K-SADS-PL) and Ottawa Self Injury Inventory (OSI-Clinical) will be used for assessment.

Results: The data will be analyzed according to socioeconomic status, gender and developmental aspects of adolescents. The results of the study will be used in further planning and development of projects regarding NSSI in adolescents.

P25-45

Non-suicidal self injurious behavior characteristics in adolescence

Zeki, Ayse¹; Cuhadaroglu, Fusun²

¹Hacettepe University School of Medicine, Child and Adolescent Psychiatry Department, Turkey; ²Hacettepe University Faculty of Medicine, Child and Adolescent Psychiatry Department, Turkey