non-clinical populations of young people, which generally displayed the highest quality of evidence. Although of overall lower quality, this relationship was also evident in clinical populations of young people with mental health problems other than psychosis. Evidence for the role of anxiety in those at clinical risk high for psychosis or diagnosed with psychosis was less conclusive, with very few studies, of variable quality, identified. These studies provided mixed findings, with some evidence for a co-occurrence between anxiety and psychosis risk/disorder, but no clear evidence of a causal role for anxiety in the transition to psychotic disorder. The size of the associations with anxiety appeared to vary by psychotic experience, with moderate evidence for hallucinations and little evidence grandiosity or anhedonia. Paranoia has the strongest evidence for a relationship with anxiety. Most studies were cross-sectional with few longitudinal studies preventing clear conclusions on a causal role of anxiety.
Discussion: Evidence suggests that anxiety and psychotic experiences may co-occur in young people. This relationship appears to be transdiagnostic and potentially specific to individual psychotic experiences. As a result, more studies focusing on specific psychotic symptoms and psychological mechanisms are needed. However, research must move beyond cross-sectional associations and test the potential contributory causal role of anxiety using prospective, experimental, and interventionist designs. Despite the unknown direction of causality, the notable associations of psychotic experiences and anxiety in child mental health services indicate that this relationship may be of clinical importance. Establishing higher quality research in clinical settings is essential. Testing the effect of treating anxiety on the severity of psychotic symptoms will inform early intervention.

S33. ETRO - A PROSPECTIVE FOLLOW-UP STUDY OF THE COMBINED TREATMENT APPROACH "ROBIN" FOR ADOLESCENTS WITH HIGH RISK FOR DEVELOPING A PSYCHOTIC DISORDER: THERAPY MODULES ENHANCED BY A SMARTPHONE APPLICATION

Maurizia Franscini*[,1], Nina Traber-Walker[1], Miriam Gerstenberg[1], Sibylle Metzler[1], Susanne Walitza[1]
[1]*Psychiatric University Hospital Zurich*

Background: The most promising strategy in targeted prevention of psychotic disorders is to treat the at risk-symptoms in the pre-psychotic period. Although high risk-symptoms for psychotic disorder are common in adolescence and associated with a marked reduction in functioning, the evidence base required to guide effective interventions for adolescents at risk and even first-episode psychosis is limited. The clinicians from the early intervention center in Zurich have developed the treatment approach "Robin" (standardized manual and smartphone App) for adolescents with high risk for developing a psychotic disorder. The manual is targeting at risk-symptoms, comorbid disorders, improvement of quality of life and daily functioning. The therapy modules are based on evidence based treatment strategies in adults with a high risk and recommendations for adolescents with first episodes of psychosis. It follows the guidelines on early intervention in clinical psychosis high risk states of the European Association for Psychiatry. The intervention also includes a smartphone application for supporting the patients between sessions. This application targets real-time symptom assessment, medication adherence, and provides coping strategies for dealing with symptoms of psychosis and daily life hurdles.
Methods: The clinical intervention study ETRo is designed as a naturalistic controlled trial. The goal is to compare efficacy of a 16-week intervention in patients with at-risk symptoms (age range 13–18) with an active control group (treatment as usual). Power calculations conducted in collaboration with a statistician determined the recruitment goal of 30 participants in the treatment condition. Participants from a former early recognition study (N=62, Age: 13–18 years, Ø 15.06) are included for the control condition. For the intervention condition, help seeking adolescents with APS-Symptoms, aged 13–18, are being recruited during a three year time period. Within this prospective study, at-risk symptoms and data for comorbid symptoms, functioning, self-efficacy, and quality of life are collected at six time points (baseline, during the treatment period, immediately after intervention and 6, 12 and 24 months later).
Results: Since August 2017, first participants have been included and their treatment has started. In Florence, we will present our first results. This will include implementation of the treatment program and first findings of treatment period.
Discussion: Even though young patients with at-risk symptoms may profit best of specialised treatment approaches, little is known about age-appropriate treatment strategies in this vulnerable age group. This is one of the first controlled trials to test the efficacy of a specific treatment program for minor patients with attenuated psychotic symptoms.

S34. DEVELOPMENTAL TRAJECTORIES OF PSYCHOTIC EXPERIENCES AND THEORY OF MIND IN 11-YEAR-OLD OFFSPRING OF PARENTS WITH SCHIZOPHRENIA OR BIPOLAR DISORDER

Maja Gregersen*[,1], Lars Clemmensen[2], Anne Søndergaard[3], Camilla Jerlang Christiani[3], Nicoline Hemager[4], Ditte Ellersgaard[3], Katrine Søborg Spang[5], Aja Greve[6], Ditte Lou Gantriis[6], Christina Bruun Knudsen[6], Anna Krogh Andreassen[6], Lotte Veddum[6], Henriette Brockdorff Stadsgaard[6], Vibeke Fuglsang Bliksted[6], Ole Mors[6], Kerstin J. Plessen[7], Merete Nordentoft[8], Jens Richardt Møllegaard Jepsen[9], Anne A.E. Thorup[5]
[1]*Mental Health Services, Capital Region of Denmark, Mental Health Centre Copenhagen;* [2]*Mental Health Services, Capital Region of Denmark, Child and Adolescent Mental Health Centre;* [3]*Mental Health Services, Capital Region of Denmark, Mental Health Centre Copenhagen, The Lundbeck Foundation Initiative for Integrative Psychiatric Research;* [4]*Mental Health Services, Capital Region of Denmark, Mental Health Centre Copenhagen, Child and Adolescent Mental Health Centre, The Lundbeck Foundation Initiative for Integrative Psychiatric Research;* [5]*Mental Health Services, Capital Region of Denmark, Child and Adolescent Mental Health Centre, The Lundbeck Foundation Initiative for Integrative Psychiatric Research;* [6]*The Lundbeck Foundation Initiative for Integrative Psychiatric Research, Aarhus University Hospital;* [7]*Mental Health Services, Capital Region of Denmark, Child and Adolescent Mental Health Centre, The Lundbeck Foundation Initiative for Integrative Psychiatric Research, University of Copenhagen;* [8]*Mental Health Services, Capital Region of Denmark, Mental Health Centre Copenhagen, The Lundbeck Foundation Initiative for Integrative Psychiatric Research, University of Copenhagen;* [9]*Mental Health Services, Capital Region of Denmark, Child and Adolescent Mental Health Centre, The Lundbeck Foundation Initiative for Integrative Psychiatric Research, Center for Clinical Intervention and Neuropsychiatric Schizophrenia Research*

Background: The study is a part of the Danish High Risk and Resilience Study, Via 11 and aims to explore the developmental trajectories of psychotic experiences (PEs) and theory of mind in children born to parents with schizophrenia or bipolar disorder. In a cross sectional perspective we also aim to explore possible associations between PEs and social cognitive deficits, particularly hyper-theory-of-mind. We also wish to explore the significance of other potential risk factors for PEs such as cognitive biases,

adverse life events, and insecure attachment styles. Earlier studies have shown that PEs during childhood are predictive of later psychotic disorders, especially if they persist over time. We expect the possible risk factors to have a cumulative effect.

Methods: The Danish High Risk and Resilience Study, Via 11, is the first follow-up of a cohort of 522 children and their parents. The cohort consists of children where one or both parents have been diagnosed with a schizophrenia spectrum disorder (N=202), children where one or both parents have been diagnosed with bipolar affective disorder (N=120) and children where neither of the parents have been diagnosed with these disorders (N=200). The children and their parents were assessed with a comprehensive assessment battery e.g. social- and neurocognitive tests and diagnostic interviews when the children were seven years old, and they will now be re-assessed for the first time at age 11. Data for this study is currently being collected as a part of the Via 11. Psychotic experiences will be assessed on the Scale of Prodromal Symptoms based on K-SADS interviews and with the Magical Thinking Questionnaire. Social cognitive skills will be assessed with Frith-Happé Animated Triangles and Theory-of-Mind Storybook Frederik. Cognitive bias i.e. jumping to conclusions will be assessed with the Beads task. Adverse life events will be assessed with the K-SADS interviews, the Child Trauma Screening Questionnaire, and with a questionnaire about bullying based on the Olweus Bully/Victim Questionnaire. Measures of neurocognitive and attentional deficits will also be included. Child attachment style was assessed with the Story Stem Assessment Protocol and emotion recognition with the ERT from Cantab.

Hypotheses:

-Age seven: Children in the two high risk groups will be have higher rates of insecure or disorganized attachment styles compared with children in the control group. We expect insecure and disorganized attachment to be associated with poorer social cognition (theory of mind and emotion recognition) and with worse general psychopathology and PEs.

-Age 11: We expect children born to parents with schizophrenia spectrum disorders to report higher frequencies of PEs than children born to parents without these disorders. We expect children with PEs to have higher levels of general psychopathology and poorer levels of daily functioning than children without PEs. We expect children in the two high risk groups to have poorer theory of mind than children in the control group.

-Age 11: We expect PEs to be associated with poor social cognition, particularly hyper theory-of-mind, higher rates of cognitive bias, adverse life events, neurocognitive and attentional impairments, and to be predicted by insecure and disorganized attachment styles.

Results: The data collection started in March 2017. Results from the 11-year-follow-up are expected in 2020.

Discussion: Examining PEs over time during childhood is important since it may improve our ability to identify children who are at a particularly high risk of developing psychotic disorders and other psychopathology later in life and thus to identify a particularly vulnerable subgroup towards whom early interventions should be targeted.

S35. NEURORADIOLOGICAL FINDINGS IN CHILD AND ADOLESCENT PATIENTS WITH PSYCHOTIC DISORDERS

Justo Pinzón Espinosa*[,1], Adriana Fortea[1], Laura Espinosa[1], Anna Giménez[1], Gerard Anmella[1], Immaculada Baeza[2], Gisela Sugranyes[2]

[1]Hospital Clinic of Barcelona; [2]Hospital Clínic of Barcelona, IDIBAPS

Background: A 22 - 31% prevalence of abnormal radiological findings (RF) has been reported among patients with first episode of psychosis (FEP), ranging from clinically non-significant findings to overt neurological pathology. While one study (Borgwardt et al., 2006) found a higher proportion of RF in adult subjects at high risk for psychosis (35%) and FEP patients (40%) than in patients with depression (18%) or healthy controls (12%), another found a similar increase in RF in patients with affective and psychotic disorders (Landin et al, 2016). This suggests that macroscopic brain anomalies may be characteristic of at least a subset of patients in the early stages of psychosis, and these RF may not be specific to schizophrenia, but also to psychosis with affective symptoms.

To this day, all published research studies have been done in primarily adult samples. Psychosis with onset before age 18 may be associated with more salient biological features linked with greater genetic load and neurodevelopmental antecedents (Arango, 2014).

Aims: To assess the prevalence of neuroradiological abnormalities in a population with early-onset psychosis (EOP) in comparison to a sample of community controls, and to evaluate the association of these findings with the type of psychotic disorder of the patients.

Methods: Design: Naturalistic, observational, retrospective, single-center controlled study.

A chart review of individuals admitted to the Inpatient unit of the Dept. of Child and Adolescent Psychiatry and Psychology from January 2013 to December 2016 was done. Patients were 6 to 17 years old, fulfilled DSM-IV-TR criteria for a psychotic disorder (PD), and had a radiology report of a brain MRI. The community control (CC) group had a similar age and gender distribution and no current diagnosis of any psychotic disorder. Any neurological or severe medical condition or head trauma with loss of consciousness were exclusion criteria for both groups.

Sociodemographic, clinical, and radiological variables were recorded for both groups. Given the association of abnormal RF with prematurity, perinatal complications and neurodevelopmental disorders, these data were collected and sorted dichotomously.

Descriptive statistical analysis consisted of a means and standard deviation for quantitative variables and percentages for qualitative variables. Between-group differences were calculated with chi-square test or Fisher's test using IBM SPSS v23.

Results: A total of 191 individuals were included (127 PD vs 64 CC, mean ages: 14.7 ± 1.8 vs 13.8 ± 2.3, t=3.0, p=.01; %females: 55.9.0% vs 60.9%, $\chi 2$=.44, p=.50). Main diagnoses in PD were psychosis not otherwise specified (PNOS) (59.1%), schizoaffective disorder (SAD) (12.6%), schizophrenia (SCZ) (11.0%), bipolar disorder (BD) (8.7%) and major depression with psychotic features (MDD) (8.7%).

The PD group presented with a significantly higher prevalence of qualitative neuroimaging abnormalities in comparison to CC (21.3% (n=27) vs 6.2% (n=4), $\chi 2$=7.1, p=.008). These included arachnoid cysts, dilated perivascular space or white matter intensity anomalies. The prevalence of abnormal RF was 25.3% in PNOS, 21.4% in SCZ, 18.2% in MDD 12.5% in SAD and 9.1% in BD.

Discussion: A significantly higher prevalence of RF was found in youth with both affective and non-affective psychosis compared to similar-aged controls, concurring with some (Borgwardt et al., 2006; Landin et al., 2016), yet not with other (Sommer et al., 2013) observations in adult samples. These findings may reflect an impact of subtle biological alterations associated with psychosis on brain development, which may be more salient in early-onset cases.

Our data highlight the need to continue assessing the significance of abnormal RF in patients with EOP

S36. DIFFERENTIAL ENCODING OF SENSITIZATION AND CROSS SENSITIZATION TO PSYCHOSTIMULANTS AND ANTIPSYCHOTICS IN NUCLEUS ACCUMBENS D1- AND D2-RECEPTOR EXPRESSING MEDIUM SPINY NEURONS

Davide Amato*[,1], Jasper Heinsbroek[1], Peter W. Kalivas[1]

[1]Medical University of South Carolina

Background: Nearly half of all individuals diagnosed with schizophrenia abuse addictive substances such as cocaine. Currently, the neurobiological mechanisms in patients with schizophrenia that lead to cocaine abuse are