

## Poster Session II

## M1. INVESTIGATING THE RELATIONSHIP BETWEEN CHILDHOOD TRAUMA AND PSYCHIATRIC DISEASE USING MACHINE LEARNING TECHNIQUES

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**Background:** Childhood trauma (CT) is associated with an increased risk for psychiatric disorders like major depression and psychosis. However, the pathophysiological relationship between CT, psychiatric disease and structural brain alterations is still unknown.

**Methods:** PRONIA ('Personalized Prognostic Tools for Early Psychosis Mangement') is a prospective collaboration project funded by the European Union under the 7th Framework Programme (grant agreement n° 602152). Considering a broad set of variables (sMRI, rsMRI, DTI, psychopathological, life event related and sociobiographic data, neurocognition, genomics and other blood derived parameters) as well as advanced statistical methods, PRONIA aims at developing an innovative multivariate prognostic tool enabling an individualized prediction of illness trajectories and outcome. Seven clinical centers in five European countries and in Australia participate in the evaluation of three clinical groups (subjects clinically at high risk of developing a psychosis (CHR), patients with a recent onset psychosis (ROP) and patients with a recent onset depression (ROD)) as well as healthy controls (HC). To investigate the high-dimensional patterns of CT experience, measured by the childhood trauma questionnaire (CTQ), in HC and our three patient groups (PAT) (n=643), we used a Support Vector Machine (SVM). Furthermore, we tested whether patient-specific CT exposure is associated with structural brain changes by VBM analyses.

**Results:** We found that patients and HC could be separated very well by their CTQ pattern, whereas the different patient groups showed no specific CTQ pattern. Furthermore, an association with extensive grey matter changes suggests an impact on brain maturation which may put individuals at increased risk for mental disease.

**Discussion:** We have demonstrated in this large multi-center cohort that adverse experiences in childhood contribute transdiagnostically to the risk for developing a psychiatric disease. The observed association between CTQ scores and structural changes suggests an impact of adverse childhood experiences on brain development. Resulting alterations may add to a neurobiological vulnerability for depression and psychosis. A role of both features for other mental disorders could be assumed and warrants further investigation.

## M2. STRESS IS ASSOCIATED AND PREDICTS SCHIZOTYPIC AND PSYCHOTIC-LIKE EXPERIENCES IN THE FLOW OF DAILY LIFE IN NONCLINICAL AND INCIPIENT PSYCHOSIS INDIVIDUALS

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**Background:** Daily-life stressors, specially of a social nature, seem to play an important role in the origin and expression of the continuum of psychosis vulnerability. This study examined whether social stress and social positive appraisals in daily-life were associated, respectively, with the occurrence and the decrease of momentary psychotic-like and paranoid experiences and symptoms across the psychosis continuum.

**Methods:** Both social stressors and positive appraisals, as well as psychotic and paranoid experiences, were collected by means of Experience Sampling Methodology over a week. Schizotypy was assessed with the Wisconsin Schizotypy Scales. Participants were 206 nonclinical individuals oversampled for schizotypy scores (mean age=19.8) and 113 individuals with at-risk mental states for psychosis and first episode psychosis (74 and 39, respectively; mean age=22.5).

**Results:** In the nonclinical sample, appraisals of social stress (but no social contact per se) were associated with psychotic-like and paranoid experiences in daily-life, but not with diminished thoughts or emotions (negative-like symptoms). The association of stress with psychotic and paranoid experiences was moderated by positive, but not negative, schizotypy. In the clinical sample, the positive social appraisal of feeling cared for by others moderated the association between negative self-esteem and the experience of paranoia. Also, they predicted (time-lagged analyses) a decrease of these experiences at subsequent time points—although only feeling cared about did so when the previous level of paranoia was controlled for.

**Discussion:** Consistent with models postulating that stress-sensitivity is a potential mechanistic pathway of, specifically, the positive dimension of psychosis, situational and also social stress predicted psychotic-like and paranoid experiences only in participants with high positive schizotypy. Furthermore, positive social appraisals showed a critical role for buffering the expression of paranoia associated to poor self-esteem in clinical risk for and early psychosis and predicted its amelioration prospectively. Altogether, these findings support the notion that increased sensitivity to social cues is a critical aspect for both risk and resilience mechanisms in the continuum of psychosis. Additionally, they highlight the powerful relevance of positive social identification for dampening the deleterious effects of poor self-esteem and stress.

## M3. THEORY OF MIND IN INDIVIDUALS WITH FIRST-EPISODE OF SCHIZOPHRENIA AND CHILDHOOD TRAUMA

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**Background:** A history of Childhood Trauma (CT), i.e., physical or emotional abuse or neglect, and sexual abuse, is reportedly more prevalent in individuals suffering from psychosis than in the general population. Crucial questions