

**Objectives:** With the hypothesis of similar impairments in schizophrenia and 22q11.2DS, to investigate a possible correlation between Social Cognition (SC) and Interpersonal Functioning (FU).

**Methods:** Sample consists of 1735 adults: 893 schizophrenic subjects (SCZ); 18 with 22q11.2DS and psychosis (DEL\_SCZ); 44 22q11.2DS individuals (DEL); 780 healthy controls (HC). SCZ and HC data come from a multicentric study by Network for Research on Psychoses. SC was assessed with The Awareness of Social Interference Test (TASIT, consisting of three sections: T1=Emotion Recognition; T2=Minimal Social Inference; T3=Social Inference Enriched). The Specific Levels of Functioning (SLOF) interview was employed.

**Results:** DEL\_SCZ ( $p < 0.001$ ) and SCZ ( $p < 0.001$ ) showed impairments in each TASIT sections compared to HC. Significant deficits in interpersonal functioning area were found in SCZ ( $p < 0.001$ ) compared to HC. The interpersonal functioning domain showed a positive correlation with SC in HC (T1:  $r = 0.097$ ;  $p < 0.001$ ; T2:  $r = 0.120$ ;  $p = 0.001$ ; T3:  $r = 0.121$ ;  $p = 0.001$ ); DEL (T1:  $r = 0.380$ ;  $p = 0.024$ ; T2:  $r = 0.466$ ;  $p = 0.005$ ) and SCZ (T1:  $r = 0.113$ ,  $p = 0.001$ ; T2:  $r = 0.110$ ,  $p = 0.001$ ; T3:  $r = 0.134$ ;  $p < 0.001$ ).

**Conclusions:** SC deficits both in subjects with 22q11.2DS and in people with schizophrenia suggest a role of endophenotypes. SC is directly correlated to interpersonal functioning in 22q11.2DS without psychosis and people with schizophrenia. DEL\_SCZ may suffer from deeper cognitive and symptomatic conditions that both impact differently on FU.

**Keywords:** 22q11.2 Deletion Syndrome; social cognition; schizophrenia; Real life functioning

## EPP1246

### Investigation of electrophysiological markers to predict clinical and functional outcome of schizophrenia using sparse partial least square regression

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**Introduction:** Despite innovative treatments, the impairment in real-life functioning in subjects with schizophrenia (SCZ) remains an unmet need in the care of these patients. Recently, real-life functioning in SCZ was associated with abnormalities in different electrophysiological indices. It is still not clear whether this relationship is mediated by other variables, and how the combination of

different EEG abnormalities influences the complex outcome of schizophrenia.

**Objectives:** The purpose of the study was to find EEG patterns which can predict the outcome of schizophrenia and identify recovered patients.

**Methods:** Illness-related and functioning-related variables were measured in 61 SCZ at baseline and after four-years follow-up. EEGs were recorded at the baseline in resting-state condition and during two auditory tasks. We performed Sparse Partial Least Square (SPLS) Regression, using EEG features, age and illness duration to predict clinical and functional features at baseline and follow up. Through a Linear Support Vector Machine (Linear SVM) we used electrophysiological and clinical scores derived from SPLS regression, in order to classify recovered patients at follow-up.

**Results:** We found one significant latent variable ( $p < 0.01$ ) capturing correlations between independent and dependent variables at follow-up (RHO=0.56). Among individual predictors, age and illness-duration showed the highest scores; however, the score for the combination of the EEG features was higher than all other predictors. Within dependent variables, negative symptoms showed the strongest correlation with predictors. Scores resulting from SPLS Regression classified recovered patients with 90.1% of accuracy.

**Conclusions:** A combination of electrophysiological markers, age and illness-duration might predict clinical and functional outcome of schizophrenia after 4 years of follow-up.

**Keywords:** schizophrenia; EEG; Outcome prediction

## EPP1247

### Resting-state functional connectivity of the ventral tegmental area and negative symptom domains in subjects with schizophrenia

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**Introduction:** Negative symptoms (NS) represent a core aspect of schizophrenia with a huge impact on real life functioning. Dysfunctions within the dopaminergic cortico-striatal circuits have been documented in subjects with schizophrenia (SCZ) and hypothesized as possible neurobiological mechanisms underlying some domains of NS.

**Objectives:** We investigated relationships between the resting-state functional connectivity (RS-FC) of the ventro-ventral tegmental area (VTA) and NS.

**Methods:** Resting-state fMRI data were recorded in 35 SCZ, recruited within the Italian Network for Research on Psychoses. We performed partial correlations between RS-FC and NS (evaluated with the Brief Negative Symptom Scale) controlling for possible sources of secondary negative symptoms.

**Results:** We found that the experiential domain correlated with the RS-FC of the VTA with the left ventro-lateral prefrontal cortex (IVLPFC) ( $r=0.372$ ,  $p=0.039$ ), while the Expressive deficit domain correlated with the RS-FC of the VTA with the left dorso-lateral prefrontal cortex (IDLFPFC) ( $r=0.470$ ,  $p=.008$ ). Looking at subdomains, only the avolition ( $r=0.418$ ,  $p=0.019$ ) and the blunted affect ( $r=0.465$ ,  $p=.008$ ) showed the same correlations of the domains to which they belong.

**Conclusions:** According to our findings, separate dysfunctional neuronal circuits could underpin distinct negative symptom subdomains. A better understanding of neurobiological dysfunctions underlying NS could help to design new treatments, targeting different NS subdomains.

**Keywords:** schizophrenia; negative symptoms; functional magnetic resonance; functional connectivity

## EPP1248

### Covid 19, lockdown and brief psychotic disorders

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**Introduction:** Acute and transient psychotic disorders are a rare condition entity as the sudden appearance of affective, confusional symptoms and paranoia triggered by some psychological trauma. The current pandemic caused by COVID-19 is an important psychological stressor that could favor the appearance of acute psychotic disorders. Several studies have been recently published proposing that the multifactorial stress associated with lockdown could function as a catalyst for acute psychotic disorders.

**Objectives:** To present a case of a brief psychotic disorder during the national lockdown in Spain and to review the literature about the relationship between the current pandemic and psychosis.

**Methods:** We will present a case report and a literature review.

**Results:** We report a case of a 27-year-old woman, with no previous psychiatric history. Three weeks after the start of Spain lockdown sudden symptoms appeared with psychomotor restlessness, confused speech, emotional lability, thought blocking and persecutory and referential delusions. Physical exam, blood analysis and cerebral CT scan with no alterations. Treatment was performed with aripiprazole 10 mg and lorazepam 1 mg daily with clinical improvement in one week. She was diagnosed of Acute transient psychotic disorder.

**Conclusions:** Stressful life events that can trigger psychosis in vulnerable individuals and the current pandemic and lockdown context could favor the appearance of acute psychotic disorders. The case reported here is in line with other current studies that show a preliminary intuition of this trend.

**Keywords:** brief psychotic disorder; lockdown

## EPP1249

### Reduced prefrontal activity and suicidal behaviour in early schizophrenia

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**Introduction:** Approximately, 15- 26% of patients with first-episode psychosis, including schizophrenia, are likely to have attempted suicide by their first treatment contact. Studies of suicidal behavior outside of schizophrenia have indicated grey matter volume loss in the prefrontal and orbitofrontal cortex, and aberrant brain activity in relation to emotional recognition and dysfunction.

**Objectives:** This study aimed to investigate the functional neural correlates of suicidal behavior in early schizophrenia.

**Methods:** fMRI faces task was conducted (fearful face versus neutral face) in 8 participants with first-episode schizophrenia together with standardised scales including PANSS and SBQ-R. fMRI activation was compared using a two-sample t-test in participants with low and high suicidal behavior. Extent threshold is 0 voxels and significance level  $p<0.001$  (FWE corrected). Processing of images was carried out using SPM12 and Matlab.

**Results:** 8 participants were recruited; 5 males and 3 females, mean age of 26.5. Results suggest that participants with higher suicidal behaviour showed reduced activation on the anterior-cingulate gyrus and medial frontal gyrus, which are parts of PFC, ( $p=.005$ ). There was also a significant difference in task response accuracy, where, participants with high suicidal behaviour made more accurate responses compared to low group ( $t(3) = 3.65$ ,  $p = .035$ ).

**Conclusions:** This is an exploratory study, investigated the differences in brain activity in patients with schizophrenia who are at risk of completed suicide and, therefore might provide new insights into the underlying mechanisms. Further work should address how PFC activity changes with risk over time and its potential utility as a biomarker in suicide.

**Keywords:** suicidal behaviour; schizophrenia; FEP; prefrontal activity

## EPP1250

### Sociodemographic, lifestyle and clinical factors associated with good performance in paired associates learning (PAL) test in patients with schizophrenia

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**Introduction:** Memory and learning deficits are central among cognitive deficits in schizophrenia. However, to a varying proportion ca. 20-25% of patients could not be considered deficit.