Methods: The present study aimed to examine the construct validity of BNSS, by using convergent and divergent validities as well as factor analysis, in a Brazilian sample of 111 outpatients diagnosed with schizophrenia by DSM-5. Patients were evaluated by the Brazilian version of the BNSS and positive and negative subscales of the Positive and Negative Syndrome Scale (PANSS).

Results: Assessment of patients by both instruments revealed an either an excellent internal consistency (Cronbach's alpha = 0.938) or inter-rater reliability (ICC = 0.92), as well as a strong correlation between BNSS and negative PANSS (r = 0.866) and a weak correlation of the instrument with the positive PANSS (r = 0.292) thus characterizing adequate convergent and discriminant validities, respectively. The exploratory factor analysis identified two distinct factors, namely, motivation/pleasure and emotional expressivity, accounting for 68.63% of the total variance.

Discussion: The study shows that the Brazilian version of the BNSS has adequate psychometric properties and it is a reliable instrument for the assessment of negative symptoms in schizophrenia, either for clinical practice or research.

F111. ELECTROPHYSIOLOGICAL CORRELATES OF AVOLITION-APATHY DOMAIN IN SCHIZOPHRENIA

Giulia Giordano1, Thomas Koenig2, Armida Mucci1, Annarita Vignapiano1, Antonella Amadio1, Giorgio Di Lorenzo1, Cinzia Niolo1, Mario Altamura4, Antonello Bellomo2, Silvana Galderisi1

1University of Campania “Luigi Vanvitielli”; 2Translational Research Center, University Hospital of Psychiatry Bern; 3University of Rome Tor Vergata; 4University of Foggia

Background: Negative symptoms represent a core feature of schizophrenia. They have been associated to poor functional outcomes and worse quality of life and poor response to pharmacological treatment. Several factor analytic studies have reported that negative symptoms can be divided into two domains referred to as Avolition-apathy which includes Avolition, Anhedonia and Asociality and the Expressive deficit domain, which includes Alogia and Blunted affect.

Avolition-apathy has been associated to a dysfunction of brain circuits involved in motivation, in particular to those related to the ability to anticipate pleasure and learn from rewards. It is highly controversial whether Avolition-apathy and all subcomponent symptoms share the same neurobiological underpinnings.

Our study, using brain electrical microstates (MS) which reflect global, subsecond patterns of functional connectivity, had two primary aims: 1) to identify differences between healthy controls (HC) and clinically stable people with schizophrenia (SCZ) in brain electrical microstate parameters and 2) to investigate the associations of the microstate parameters with the Avolition-apathy domain and its subcomponent symptoms.

Methods: We analyzed multichannel resting EEGs in 142 SCZ and in 64 HC, recruited within the add-on EEG study of the Italian Network for Research on Psychoses. The microstate analysis was performed using an in-house plugin for Brain Vision Analyzer. Based on the microstate map templates from a large normative study, each moment of the ongoing EEGs was assigned to one of four microstates (MS) classes (MS-A, MS-B, MS-C, MS-D). Microstates were then quantified in terms of relative time contribution, duration and occurrence. Negative symptoms were assessed using the Brief Negative Symptoms Scale (BNSS): Avolition-apathy was obtained by summing the scores on the subscales Anhedonia (consummatory and anticipatory anhedonia), Avolition and Asociality; Expressive deficit was computed by summing the scores on the subscales Blunted Affect and Alogia.

Analysis of variance (ANOVA) was used to test group differences on MS parameters. Pearson’s r coefficients were computed to investigate the correlations of MS parameters with the negative symptom domains and subcomponent symptoms.

Results: There was no significant group difference in sex (p=0.073) and age (p=0.547) between SCZ and HC. SCZ, in comparison to HC, showed increased contribution (p=0.009) and duration (p=0.016) of MS-C. As regard to negative symptoms, the total score of the BNSS was positively correlated with the contribution of MS-A (r= 0.19, p<0.03). Avolition-apathy domain (r=0.22, p<0.01), anticipatory anhedonia (r=0.20, p=0.02), avolition (r=0.20, p=0.02) and asociality (r=0.25, p=0.003), but not consummatory anhedonia (r=0.13, p=0.13), were positively correlated with the contribution of MS-A. There was no correlation between Expressive deficit and MS-A parameters.

Discussion: Our findings, in line with previous studies, showed an increased contribution of MS-C in SCZ. MS-C was not associated with clinical features, thus probably representing a trait marker of the disease. In addition, our results support different neurophysiological correlates of the two negative symptom domains and suggest that only anticipatory anhedonia, but not consummatory anhedonia, might be linked to the Avolition-apathy domain. These findings are in line with studies reporting an intact ability to experience in the moment pleasure and an impairment in pleasure anticipation (anticipatory anhedonia) in people with schizophrenia.

F112. LESS SYMPTOMS IN SCHIZOPHRENIA – A RISK FACTOR FOR IMPAIRED INSIGHT OF FUNCTIONING?

Olsson Anna-Karin*, 1 Maivor Olsson-Tall4, Hawar Moradi2, Fredrik Hjärthag1, Lars Helldin2

1Karlstad University 2NU Health Care Hospital; 3Health Care Hospital, and Karlstad University

Background: People with schizophrenia demonstrate deficits in insight and the ability to self-evaluate their functioning. Research about patients' ability to recognize their psychotic symptoms is well established, but recent findings show that there are still unexplored fields regarding how patients perceive their level of functioning. A previous study showed that patients who overestimate their functioning, also consistently get high scores in interview-based assessment regarding real-world functional performance. The possible consequences of patients’ ability to correctly estimate their function need to be further investigated. The aim of the present study was to examine how the perception of one's own capacity relate to symptoms in patients with schizophrenia spectrum disorders.

Methods: Data collection took place within the ongoing project Clinical Long-term Investigation of Psychosis in Sweden (CLIPS), which examines psychiatric outpatients. In this study, 222 patients with schizophrenia participated. They were divided into four groups based on their results on the UPSA-B and their self-perceived function; two groups with ordinary function (accurate estimators and under-estimators) and two groups with low function (accurate estimators and over-estimators). The groups were compared regarding psychiatric symptoms, examined using the Positive and Negative Syndrome Scale (PANSS). Non-parametric statistics were used to analyze differences in their symptoms.

Results: There were statistically significant differences in the total score of PANSS across the four groups of function. The following analyses showed significant differences in the negative and general domain. Results from the post hoc examination revealed identical patterns in these two symptom domains. The group with Low function accurate estimators have significantly more severe symptoms compared to the other three groups.
**F113. IMPACT OF NEIGHBORHOOD CHARACTERISTICS ON PARANOIA, LONELINESS, AND PERCEIVED REJECTION IN A TRANSDIAGNOSTIC SAMPLE WITH PSYCHOSIS**

Christina Savage¹, Cristina Garcia¹, LeeAnn Shan¹, Alexandra Andrea¹, Melanie Bennett², Jack Blanchard¹

¹University of Maryland; ²University of Maryland School of Medicine

**Background:** Paranoia is unsubstantiated thinking that others want to cause harm, and it exists on a spectrum ranging from suspicion to delusions both in the general population and in individuals with psychosis (Freeman et al., 2011; Freeman, 2016). Paranoia is interpersonal in nature, and research has shown that individuals with paranoid delusions use person attributions more than depressed or healthy controls during a task with interpersonal vignettes (Bentall, Kaney, & Dewey, 1991). Therefore, it is important to explore how other interpersonal or social factors may affect paranoia. Neighborhood characteristics, such as reduced social cohesion and crime, perceived rejection, and loneliness have been associated with paranoia (Lamster, Nittel, Rief, Mehl, & Lincoln, 2017; Newbury et al., 2017; Wickham, Taylor, Shevlin, & Bentall, 2014). However, it is still unclear whether these factors affect paranoia independently or have a more additive influence. Some researchers have proposed that perceived rejection and loneliness reduce community engagement and the size of social networks in this population (Cechnicki & Wojcieszowska, 2008; Kidd et al., 2016), but others have not supported these findings (Trémeau et al., 2016). The current study will try to clarify the literature by exploring the associations between neighborhood characteristics, social factors (namely, perceived rejection and loneliness), social network, and paranoia.

**Methods:** The current study will examine how paranoia correlates with neighborhood characteristics, loneliness, perceived rejection, and social network size in a transdiagnostic sample with psychosis. We will utilize the Neighborhood Environment Scale (Mujahid et al., 2007) to assess perceived rejection and loneliness over 2008 to assess paranoid ideation and the Adult Social Relationship Scales (Cyranowski et al., 2013) to assess perceived rejection and loneliness over the past month. In addition, we will use the Social Network Index (Cohen et al., 1997) to investigate the correlation between participants’ social network and paranoia, social rejection, and loneliness.

**Results:** Preliminary results (N = 13) indicate a significant correlation between paranoia and perception of neighborhood social cohesion (r = -0.57, p < 0.05). In addition, loneliness (r = 0.60, p < 0.05) and perceived social rejection (r = 0.52, p < 0.05) were the largest correlates of paranoia. We will conduct formal analyses with a larger N to further explore these and other associations.

**Discussion:** Discussion will be included in the poster after more data has been collected.

---

**F114. DISORGANIZATION AND COGNITIVE DYSFUNCTIONS IN SCHIZOPHRENIA: A STUDY OF RESTING STATE EEG**

Ananrita Vignapiano¹,², Thomas Koenig², Armida Mucci¹, Giulia Maria Giordano¹, Antonella Amodio¹

Abstracts for the Sixth Biennial SIRS Conference

Giorgia Di Lorenzo¹, Cinzia Niolu¹, Mario Altamura¹, Antonello Bellomo⁴, Silvana Galderisi¹

¹University of Campania “L. Vanvitelli”; ²Translational Research Center, University Hospital of Psychiatry Bern; ³University of Rome ‘Tor Vergata’; ⁴Psychiatry Unit, University of Foggia

**Background:** A disorganization factor was found by several factor-analytic studies of schizophrenia symptoms. This factor does not appear to be affected by age, severity of other symptoms and chronicity of illness. A greater severity of disorganization is associated with poor functioning. Despite the general similarity of different factorial model, there is no consensus about which symptoms have to be included in the disorganization factor. Using the Positive and Negative Syndrome Scale (PANSS), Conceptual disorganization (P2), ‘Difficulty in abstract thinking’ (N5) and ‘Poor attention’ (G11) were core features of the disorganization factor. The overlap of these items with neurocognitive functions is still debated. However, the heterogeneity of this factor and its neurobiological basis should be further investigated.

In the context of the multicenter study of the Italian Network for Research on Psychoses, the main aims of our study were to investigate electrophysiological and neurocognitive correlates of the disorganization factor, and to assess if each PANSS item, loading on the disorganization factor, could be underpinned by similar electrophysiological or cognitive alterations.

**Methods:** Resting state EEGs were recorded for 5 minutes in 145 stabilized subjects with schizophrenia (SCZ) and 69 matched healthy controls (HC). The disorganization factor was evaluated using three PANSS items: P2, N5, and G11 (4). Neurocognitive functions were assessed using the MATRICS Consensus Cognitive Battery (MCCB). Spectral amplitude was quantified in nine frequency bands. All statistical analyses of the scalp multichannel spectral amplitude (SAMp) data were performed using RAGU software.

Statistical comparisons between the SAMp maps of SCZ and HC were assessed by topographic analyses of variance (TANOVA). In SCZ, topographic analyses of covariance (TANCOVA) evaluated correlations between SAMp and disorganization, its constituent items and MCCB domains. Furthermore, Pearson’s correlations were performed between disorganization and its constituent items and MCCB neurocognitive domains.

**Results:** TANOVA, comparing the group SAMp maps revealed increased Delta, Theta, and Beta1 and decreased Alpha2 SAMp in SCZ. In the SCZ group, disorganization was significantly correlated to the Alpha1 SAMp. This relation was negative and most pronounced at occipital sites. At the items level, only N5 showed the same negative correlation at occipital sites. MCCB neurocognitive composite score was associated with disorganization factor, and its constituent items P2 and N5. No significant correlation between Alpha1 SAMp and MCCB cognitive domains was observed.

**Discussion:** Our findings illustrate the heterogeneity of disorganization dimension and a partial overlap with neurocognitive domains. ‘Difficulty in abstract thinking’ showed a unique association with Alpha1 activity, which is thought to be involved in the construction of conceptual maps. Furthermore, the observed association of Alpha1 with ‘Difficulty in abstract thinking’ suggests that some aspects of disorganization could be underpinned by the impairment of basic neurobiological functions that are only partially evaluated using MCCB.

---

**F115. INSIGHT AND MANIC SYMPTOMS IN PATIENTS WITH CHRONIC SCHIZOPHRENIA IN THE KOREAN COMMUNITY**

Duk-In Jon¹,², Bo-Hyun Yoon³, Sang-Yeol Lee⁴, Kwanghun Lee⁴, Won-Myong Bahk³, Beomwoo Nam⁴, Sung-Yong Park⁴, Min-Kyu Song⁴

¹Hallym University Sacred Heart Hospital; ²Naju National Hospital; ³Wonkwang University School of Medicine and Hospital; ⁴Dongguk University Hospital; ⁵Yeouido St. Mary’s Hospital, The