

correlations were performed using SPSS v28 and p values < 0.05 were considered significant.

Results: Both the LET and the PANSS-LE were correlated with the CGI ($p=0.002$ and $p<0.001$ respectively), but only the PANSS-LE was found to be correlated with the GAF ($p<0.001$), the BNSS ($p<0.001$) and the HoNOS ($p<0.001$).

Conclusions: The concept of life engagement is of growing interest for healthcare professionals working in the mental health field, in line with the concept of reaching a full functional recovery and considering patient-reported outcomes. From our study it is evident that life engagement in individuals living with SSD is better characterized through the PANSS-LE rather than the LET, as the former is more specific to define the complexity of the SSD symptomatology.

Disclosure of Interest: None Declared

EPP0267

Theta-burst rTMS in schizophrenia to ameliorate negative and cognitive symptoms: a double-blind, sham-controlled, randomized clinical trial

B. Orban Szigeti^{1*}, K. Farkas¹, L. Herman¹, R. Zsigmond¹, J. Rethelyi¹ and G. Csukly¹

¹Psychiatry, Semmelweis University, Budapest, Hungary

*Corresponding author.

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Introduction: Schizophrenia is a major mental disorder that affects approximately 1% of the population worldwide. Social cognition impairments and negative symptoms such as blunted affect or emotional withdrawal strongly contribute to the psychosocial functioning deficits and long-term disability in schizophrenia. The state-like and trait-like components of social cognition are impaired in schizophrenia

Objectives: Treatment effects of conventional approaches with antipsychotics or psychosocial interventions are limited when it comes to reducing negative and cognitive symptoms in schizophrenia. While there is emerging clinical evidence that new, augmented protocols based on theta-burst stimulation can increase rTMS efficacy dramatically in depression, data on similar augmented therapies are very limited in schizophrenia. The different patterns of network impairments in subjects may underlie that some but not all patients responded to given stimulation locations.

Methods: Therefore, we propose an augmented theta-burst stimulation protocol in schizophrenia by stimulating both locations connected to negative symptoms, namely the vermis of the cerebellum and the left Dorsolateral Prefrontal Cortex (DLPFC). Ninety subjects with schizophrenia presenting negative symptoms and aging between 18-50 years will be randomized to active and sham stimulation in a 1:1 ratio. The TBS parameters we adopted follow the standard TBS protocols, with 3-pulse 50-Hz bursts given every 200 ms (at 5 Hz) and an intensity of 100% active motor threshold. We plan to deliver 1800 stimuli to the vermis and 1800 stimuli to the left DLPFC daily in two 9.5-minute blocks for four weeks.

Results: The primary endpoint is the change in negative symptom severity measured by the Positive and Negative Syndrome Scale

(PANSS). Secondary efficacy endpoints are the change in cognitive flexibility measured by the Wisconsin Card Sorting Test and the change in social cognition assessed by the 'Reading the Mind in the Eyes', facial emotion recognition, and the 'Faux pas' tests. The safety outcome is the number serious adverse events.

Conclusions: In conclusion the aim of our study is to prove the safety and efficacy of theta burst stimulation for treating negative symptoms of schizophrenia.

Disclosure of Interest: None Declared

EPP0268

Predictors of admission to an assertive outreach service for psychosis in Lebanon

G. Kassir¹, S. El Hayek², R. Charara³, M. Cherro¹, H. Itani^{1*} and J. El Khoury⁴

¹Psychiatry, American University of Beirut, Beirut, Lebanon;

²Psychiatry and Behavioral Sciences, University of Miami Miller School of Medicine, Miami; ³Center of Behavioral Health, Cleveland Clinic, Cleveland, United States and ⁴Psychiatry and Behavioral Health, American Hospital Dubai, Dubai, United Arab Emirates

*Corresponding author.

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Introduction: Schizophrenia is a chronic, debilitating mental illness that contributes significantly to the global burden of disease. Assertive outreach treatment for patients with schizophrenia and psychotic disorders has been implemented to improve treatment adherence and outcomes. The suitability of this model of care outside the western context has not been fully established. The Psychosis Recovery Outreach Program (PROP), staffed by a multi-disciplinary team that applies principles of early intervention and assertive outreach, was initiated in February 2016 at a leading psychiatric facility in Lebanon.

Objectives: The aim of this study is to identify and analyze clinical and demographic variables associated with patient enrollment in PROP, out of a typical clinical population attending a psychiatric outpatient department.

Methods: This retrospective study included patients above 18 y.o. at time of first point of care with a primary diagnosis of psychosis according to the International Classification of Diseases 10 (ICD-10), and who presented to the outpatient psychiatry department at the American University of Beirut Medical Center (AUBMC) and were following up in PROP. We collected twelve-month data and used logistic regression models to identify predictor variables for enrollment in the service compared to those receiving standard treatment.

Results: In total, 45 patients participated in the study. Patients were mostly males (77.8%), younger than 39 years (80%), of college or higher education (68.2%), and diagnosed with schizophrenia (46.7%) or schizoaffective disorder (48.9%). About one-quarter (22.7%) had a comorbid cannabis use disorder. A majority received more than one oral antipsychotic (75.6%) while half (51.1%) were maintained on a long-acting injectable (LAI) antipsychotic. The following variables were significant predictors of enrollment in PROP: having a comorbid cannabis use disorder (OR 2.83 [1.25 – 6.37]), being prescribed a LAI antipsychotic (OR 9.99 [4.93-20.24])

or more than one oral antipsychotic (OR 4.57 [2.22-9.39]), visiting the emergency department more than once (OR 8.7 [2.64-28.68]), and admission to the psychiatry unit (OR 13.91 [3.17-60.94]). In addition, those following up in PROP were younger and less likely to be in the oldest age group (over 54 years) [OR 0.11 (0.01-0.93)], less likely to be females (OR 0.39 [0.18-0.81]), and less likely to be diagnosed with “other psychotic disorder” as compared to schizophrenia (OR 0.14 [0.03 – 0.62]).

Conclusions: PROP was the first community treatment program to use the principles of assertive outreach in Lebanon. Our findings highlight that the assertive out-reach model of care is applicable to its target population in the context of psychiatric care in Lebanon, namely young individuals with psychosis, higher comorbidities and a severe course of illness.

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EPP0269

Cascadic failure and preferential decay via pruning mediated percolation on interdependent networks: implications for schizophrenia

K. Szalicsnyó^{1,2*}, P. Érdi^{2,3} and D. N. Silverstein⁴

¹Psychiatry, Uppsala University, Department of Medical Sciences, Uppsala University Hospital, Uppsala, Sweden; ²Computational Sciences Department, Wigner Research Center for Physics, Budapest, Hungary; ³Department of Physics and Department of Psychology, Kalamazoo College in Kalamazoo, Kalamazoo, United States and ⁴Agora for Biosystems, Sigtuna foundation, Sigtuna, Sweden

*Corresponding author.

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Introduction: During adolescence the brain is dynamically changing. Destabilization and acceleration of the normal adolescent synaptic pruning process is likely a contributing factor to the neuropathology of schizophrenia. Details on whether normal pruning effects weaker synapses more or uniformly all synapses with different strengths, needs to be further evaluated. Widespread impairment in structural connectivity in schizophrenic patients involving several cortical and subcortical areas, has been previously described. In this computational study, we investigated a stochastic percolation process in interdependent networks, motivated by pathological synaptic pruning. We examined preferential decay in the connectivity decremental process, as well as differential pruning in interconnected subnetworks. Finally, the speed of the percolation process, as well as the potential for pharmacological interventions of percolation in random networks was explored. Statistical structural properties of decaying networks pinpointed several network attributes which the disintegration and phase transitions qualitatively depended on.

Objectives: The following objectives were explored: 1.) Apart from a random percolation process, we investigated preferential decay of the connections. We introduced different percolation rules for various connection types. 2.) Based on previous experimental results, we assumed that different interconnected neural subpopulations prune differently, therefore we explored differential pruning process in the subnetworks. 3.) The speed of the percolation was

studied and the pharmacological synaptic connectivity change was also analyzed.

Methods: We considered two inter-connected randomly connected networks, where the connections were removed during the percolation process. Simulations were partially performed using Octave on a Lenovo Thinkpad running the Linux operating system and partially performed on a supercomputer at UPPMAX (NAISS Small Compute 2023 Dnr: NAISS 2023/22-102).

Results: We found that the coupled network system shows rich percolation behaviors with phase transitions for various coupling strength and coupling patterns. The phase transitions of both layers are altered qualitatively between discontinuous, mixed and continuous. Recursively developing percolation in interdependent networks can cause complete fragmentation of these networks, resulting in cascadic failure which might be related to schizophrenia symptoms.

Conclusions: This computational study analyzes the pruning-mediated percolation in interdependent neural networks. Consequences of the pathological overpruning were related to the attributes of the interdependent network properties. Implications for schizophrenia development and predictions for compensational iatrogenic percolation was also pinpointed and discussed.

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EPP0270

Deep brain stimulation and psychosis as side effect: A case study

M. Selakovic*, C. Panetsou, T. Karkatsoulis and D. Tsaklaidou

Department of Psychiatry, ‘Sismanoglio’ General Hospital, Athens, Greece

*Corresponding author.

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Introduction: Deep brain stimulation (DBS) of the subthalamic nucleus (STN) is a therapeutic method used for decades in neurological diseases such as Parkinson’s disease (PD), Huntington’s disease (HD) or dystonia. HD is a rare, inherited, neurodegenerative condition that causes progressive motor deficits, psychiatric symptoms, and cognitive impairment.

Objectives: Moreover, after DBS as a psychiatric side effect has been marked and the etiology of that side effect is not well-understood.

Methods: A case study of a 51 years old male is presented, who developed involuntary movements, for the first time at the age of 17, being diagnosed with Chorea Huntington, was treated with medication without improvement of the symptoms, such as rigidity and bradykinesia. After ten years, based on guidelines, he was treated with DBS, the outcome of which showed complete improvement of neurological symptomatology. Nevertheless, he started to present delusional ideas of reference with his siblings, sleep disturbance, dysphoria and agitation.

Results: Obviously, DBS improved neurological symptomatology permanently. The medical history of our patient has shown the recurrence of psychiatric symptoms as a few mandatory psychiatric