was crafted using the decision tree algorithms to distinguish between the two groups. The model demonstrated the following classification performance metrics: accuracy (65.6% ± 8.5), sensitivity (66.6% ± 12.5), and specificity (64.7% ± 13.6). Furthermore, through recursive feature elimination, specific neuroanatomical features tied to brain structures such as the inferior cerebellar peduncle, posterior thalamic radiation, cingulum (hippocampus), uncinate fasciculus, and tapetum were identified.

Conclusions: Despite of limited performance of classification, a machine learning-based approach could provide insights into the development of a diagnostic model for MDD using neuroimaging data. Furthermore, these features, derived from DTI-derived data, may have implications for understanding the neural underpinnings of major depressive disorder.

Disclosure of Interest: None Declared

EPV0621

Correlations of altered functional connectivity in resting-state fMRI and symptom severity in tic disorders

J. B. Meeh[1]*, L. Orth[2], D. Leiding[2], U. Habel[2], I. Neuner[2,3] and P. Sarkheil[1]

[1]University of Muenster, Muenster; [2]RWTH Aachen University, Aachen and [3]Research Center Jülich, Jülich, Germany
*Corresponding author.
doi: 10.1192/j.eurpsy.2024.1284

Introduction: Vocal and motor tics are characteristic for Tic disorders (TD) and Tourette's syndrome (APA 2022) . Because of the pathophysiology of the disorders not being fully understood and the presence of the externally measurable symptoms; great attention has been paid to the cortico-striatal regions of patients with TD . In addition to the alterations in motor symptoms patients can experience a premonitory urge (PU) which can be felt before a tic (Reese *et al.* Behav. Ther. 2014; 45 177–186) . Previous studies found an impact of these urges on sensory perception, attention and social cognition as well as an involvement of the brain regions insula, anterior cingulate cortex (ACC) and the temporoparietal junction (TPJ) (Seeley J. Neurosci. 2019; 39 9878–9882, Kucyi *et al.* J. Neurophysiol. 2012; 108 3382–3392, Uddin *et al.* Brain Topogr. 2019; 32 926–942) . These findings lead to the idea of altered functional connectivity of the salience network (SN) in patients with TD.

Objectives: This study aims to investigate the connectivity changes of the SN in patients with TD. We examined functional resting-state scans of patients with TD and searched for possible correlations between the tic and PU severity and the connectivity of the SN.

Methods: 21 Patients (mean age: 30.9 years ± 10.0 [range = 19–57], 6 females) diagnosed with TD, and 20 healthy controls (mean age: 29.7 years ± 8.9 [range = 18–50], 5 females) underwent a resting-state fMRI scan. Functional and anatomical images were conducted on a 3T Siemens Prisma fit MRI scanner. PU and tic severity were measured by the Premonitory Urges for Tics Scale (PUTS) and the Yale Global Tic Severity Scale (YGTSS). The connectivity analysis of the resting-state scans was done using the CONN toolbox v21.a. After pre-processing and de-noising steps, a whole-brain seed-based connectivity analysis was carried out with the seeds being the major cortical nods of the SN. For the correlation analysis a linear regression of the YGTSS score/PUTS score and the brain connectivity of the seed regions was conducted.

Results: The PUTS score was 25.3±5.4 (range 10-33) and the YGTSS total tic score was 23.1±7.9 (range 10-38) for the patients. The connectivity analysis revealed a significant difference in connectivity between the groups for the ACC, the right insula and the TPJ. A negative correlation between the YGTSS scores and the connectivity of the left insula and the right superior frontal gyrus (SFG) was shown in the correlation analysis. No significant correlation was found for the PUTS scores in the investigated seed regions.

Conclusions: The right SFG mediates motor urgency and inhibitory control. Since we found a negative correlation between the insula and the right SFG regarding to higher YGTSS scores of the patients, our results might shed some light on the pathophysiology regarding lower inhibitory control in patients which experience higher tic severity.

Disclosure of Interest: None Declared

EPV0624

Altered Cortical Gyrification Morphology in Nonsucidal Self-injury

S. Choi*, H. Moon and J.-W. Hur

Department of Psychology, Korea University, Seoul, Korea, Republic Of
*Corresponding author.
doi: 10.1192/j.eurpsy.2024.1285

Introduction: Nonsuicidal self-injury (NSSI) is defined as deliberate and direct damage to one's body tissues without any suicidal intent. NSSI is now recognized as a major risk factor for suicide and is prevalent among adolescents, with prevalence rates ranging from 7.5% to 46.5%, leading to increased interest in the pathophysiology of NSSI. This study aimed to examine cortical gyrification morphology, a neurobiological index of cortical folding and patterning, among unmedicated individuals with NSSI, which is prevalent in adolescents and young adults.

Objectives: The main objective of this study is to compare cortical morphological abnormalities between individuals with NSSI and controls in terms of the local gyrification index (LGI), the ratio of the smooth cortical surface area at each vertex to the corresponding sulcal folds. In addition, we hypothesized that the LGI, a stable neurodevelopmental marker of cortical and subcortical circuit intergrity, would correlate with clinical measures in youth with NSSI.

Methods: A total of 101 individuals with NSSI and 100 age-, gender-, and handedness-matched controls completed self-report

questionnaires and structural magnetic resonance imaging (MRI) data were acquired on a 3T Siemens scanner. A surface-based analysis was conducted using the Computational Anatomy Toolbox (CAT12) in Statistical Parametric Mapping (SPM12). Partial correlation analysis was also performed using R software to investigate the association between the LGI values extracted from the region of interest (ROI) and clinical symptoms, including depression, anxiety, emotion dysregulation, and anhedonia in individuals with NSSI.

Results: Individuals with NSSI showed significantly increased LGI in the right insula sulcus and left superior temporal sulcus (STS), along with decreased LGI in the right calcarine and left superior parietal sulcus (SPS), compared to controls (5000 permutation correction, threshold-free cluster enhancement with a threshold of $p < .05$). In addition, higher LGI in left STS was correlated with greater scores of the Beck Anxiety Inventory ($r = 0.22$, $p < .05$) and of the Impulse Control Difficulties subscale of the Difficulties in Emotion Regulation Scale ($r = 0.34$, $p < .001$). Conversely, reduced LGI of the right calcarine was associated with a higher score on the Anhedonia subscale of the Beck Depression Inventory ($r = -0.23$, $p < .05$) within individuals with NSSI.

Conclusions: This study identified hypergyria in the right insular and left STS and hypogyria in the right calcarine and left SPS in individuals with NSSI. The former pattern was associated with anxiety and impulse control difficulties, and the latter was with anhedonia. This study is the first to alter distinct neurodevelopmental patterns of local gyrification and their correlations with clinical manifestations in individuals with NSSI.

Disclosure of Interest: None Declared

EPV0625

Brain correlates of recall of negative autobiographical memories in patients with schizophrenia

L. Barbosa[1]*, A. Aquino-Servín[1], P. Fuentes-Claramonte[1,2], M. Á. García-León[1,2], A. Karuk[1], N. Jaurrieta[3], B. Hoyas-Galán[4], N. Ramiro-Sousa[5], C. Corte-Souto[6], P. McKenna[1,2] and E. Pomarol-Clotet[1,2]

[1]Neuroimaging, FIDMAG Sisters Hospitallers Research Foundation; [2]Schizophrenia, CIBERSAM, ISCIII, Barcelona; [3]Psychology, Hospital Sagrat Cor, Martorell; [4]Nursing, Hospital General de Granollers, Granollers; [5]Psychology, Hospital Sant Rafael and [6]Psychology, CSMA Vila de Gràcia-Cibeles, Barcelona, Spain
*Corresponding author.
doi: 10.1192/j.eurpsy.2024.1286

Introduction: Autobiographical memory is known to be disturbed in schizophrenia. In addition, a leading theory of auditory hallucinations (AVH) is that they are intrusive – typically negative – autobiographical memories that are misinterpreted as perceptions.

Objectives: The aim of this study was to examine the brain functional correlates of recall of negatively emotionally valanced autobiographical memories in patients with schizophrenia, with a longer term aim of comparing patients with and without AVH.

Methods: 11 patients meeting DSM-5 criteria for schizophrenia or schizoaffective disorder and 10 age, sex and estimated premorbid IQ-matched healthy controls have so far taken part.

Participants underwent functional MRI in a 3T scanner while performing a task requiring them to recall autobiographical memories in response to individually tailored pairs of cue words. The cue words were based on autobiographical memories previously elicited in an interview with each patient and were designed to evoke the same memory. The cue words were presented in 10 20-second blocks interspersed with blocks where the subjects viewed cue words that did not evoke autobiographical memories. Brain activations were examined in three contrasts of interest: memory evoking words vs baseline, neutral words vs baseline and memory evoking vs neutral words.

Pre-processing and analysis were carried out with the FEAT module included in the FSL software. Statistical analysis was performed by means of a General Linear Model (GLM) approach.

Results: In the memory evoking vs baseline contrast the patients showed hypoactivation in the medial frontal cortex compared to the healthy controls (Figure 1). There were no differences in activation between the patients and the controls comparing the memory evoking and neutral cues.

Image:
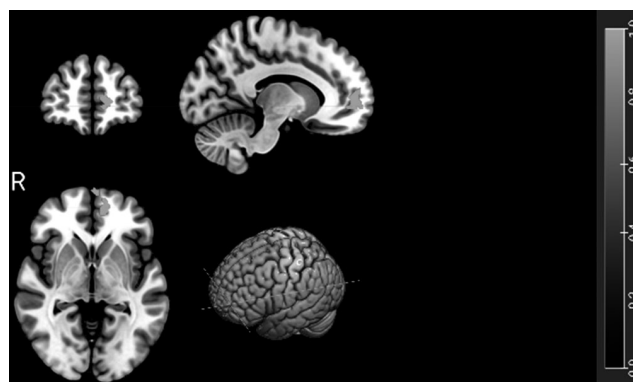
Conclusions: The finding of hypoactivation in the medial frontal cortex compared to low level baseline in patients with schizophrenia suggests dysfunction in the default mode network, which is known to activate during recall of autobiographical memories.

These preliminary results suggest that recall of negative autobiographical memories in patients with schizophrenia is associated with reduced activity in the default mode network. A planned larger sample of patients and controls will be used to examine activations in patients with and without AVH.

Disclosure of Interest: None Declared