

frontoparietal and occipitotemporal regions. Notably, no traces of such changes -differentiating the global topography of patients from HC- held when applying GSR.

**Conclusions:** Our results (i) suggest that rsFC alterations detected stem from a global rather than a local source and (ii) corroborate the impact GS can exert on generating within and between-networks differences. Hence, we underline the necessity that future investigations on groups with expected altered topographical distribution include GS within data-analysis and a proper evaluation of its involvement. Nonetheless, our results are in line with previous evidence of altered global topography in MDD. Hence, we interpreted this finding as a benchmark of a whole-brain functional disbalance toward self-oriented cognition characterizing the transnosographic depressive syndrome.

**Disclosure of Interest:** None Declared

### EPP0876

#### Self-compassion is associated with the superior longitudinal fasciculus in the mirroring network in healthy individuals

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**Introduction:** Self-compassion (SC) describes an emotionally positive attitude extended toward ourselves when we suffer, consisting of three main components; self-kindness, common humanity, and mindfulness (Germer & Neff, 2013). SC entails being warm and understanding towards ourselves when encountering pain or personal shortcomings, rather than ignoring them or flagellating ourselves with self-criticism. SC also involves recognizing that suffering and failure are part of the shared human experience rather than isolating. In addition, SC requires taking a mindful approach to one's feelings and thoughts, without judgment of them.

**Objectives:** Self-compassion (SC) involves taking an emotionally positive attitude towards oneself when suffering. Although SC has positive effects on mental well-being as well as a protective role in preventing depression and anxiety in healthy individuals, few studies on white matter (WM) microstructures in neuroimaging studies of SC has been studied.

**Methods:** Magnetic resonance imaging data were acquired from 71 healthy participants with measured levels of SC and its six subscales. Mirroring network as WM regions of interest were analyzed using tract-based spatial statistics (TBSS). After the WM regions associated with SC were extracted, exploratory correlation analysis with the self-forgiveness scale, the coping scale, and the world health organization quality of life scale abbreviated version was performed.

**Results:** We found that self-compassion scale (SCS) total scores were negatively correlated with the fractional anisotropy (FA) values of the superior longitudinal fasciculus (SLF) in healthy individuals. The self-kindness and mindfulness subscale scores of SCS were also negatively correlated with FA values of the same

regions. The FA values of SLF related to SC were found to be negatively correlated with the total scores of self-forgiveness scale, and self-control coping strategy and confrontation coping strategy.

**Conclusions:** Our findings suggest that levels of SC and its self-kindness and mindfulness components may be negatively associated with DMN-related WM microstructures in healthy individuals. These less WM microstructures may be associated with positive personal attitudes, such as self-forgiveness, self-control and active confrontational strategies.

**Disclosure of Interest:** None Declared

### EPP0877

#### Resting-state brain activity dysfunctions in schizophrenia and their associations with negative symptom domains

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**Introduction:** Negative symptoms represent a fundamental aspect of schizophrenia: they have a substantial impact on patients' real-life functioning and do not respond satisfactorily to currently available treatments. Therefore, a better understanding of the pathophysiological mechanisms underlying these symptoms could favor the development of new treatments.

To date, the most validated pathophysiological hypothesis indicates an association between the Motivational domain (consisting of avolition, anhedonia and asociality) and alterations in the neuronal circuits involved in motivation. The Expressive Deficit domain (consisting of blunted affect and alogia) would be subtended by widespread alterations of cortical connectivity and associated with impaired neurocognition, social cognition, and the presence of neurological soft signs.

**Objectives:** The aim of the present study is to examine the neurobiological correlates of the two domains of negative symptoms, starting from the brain areas that have been most commonly found in the literature to be associated with negative symptoms.

**Methods:** Resting-state (rs) fMRI data were acquired in 62 subjects with schizophrenia (SZ) and 46 healthy controls (HC). The two negative symptom domains were assessed using the Brief Negative Symptom Scale. In addition, the following assessment tools were used: the Positive and Negative Syndrome Scale for the assessment of positive symptoms and disorganization, the Calgary Depression Scale for Schizophrenia for depression and the St. Hans Rating Scale for extrapyramidal symptoms. The study of the possible relationships between rs-brain activity and the negative symptoms domains

was conducted through partial correlations, checking for possible confounding factors (positive, depressive, extrapyramidal symptoms and disorganization).

**Results:** The SZ, compared to the HC, showed higher rs-brain activity of the right inferior parietal lobule and of the right temporoparietal junction and lower rs-brain activity of the right dorsolateral prefrontal cortex, bilateral anterior dorsal cingulate cortex, bilateral ventral caudate and bilateral dorsal caudate. Furthermore, in the group of patients, the rs-brain activity of the left ventral caudate showed a moderate negative correlation with the Expressive deficit domain ( $r = -0.401$ ;  $p = 0.003$ ), but not with the Motivational domain.

**Conclusions:** The results of the present study, in line with the literature, demonstrated how the two domains of negative symptomatology are subtended by different pathophysiological mechanisms. Given the role played by the ventral caudate in neurocognitive processes, these results are in line with the hypothesis that Expressive deficit may have a common etiopathogenesis with cognitive deficits. A better understanding of the neurobiology of negative symptoms could foster the development of innovative treatment strategies targeting the two negative symptom domains.

**Disclosure of Interest:** None Declared

## EPP0878

### Beating the Odds: Is Mental Health at Stake for High-Achieving Children in Poverty in the ABCD Study?

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**Introduction:** Childhood family income is a powerful predictor of academic achievement and mental health. Here, we ask whether children living in poverty—those whose family incomes are not sufficient to meet their material needs—who beat the odds by succeeding academically are subsequently either protected from, or more at risk for, internalizing disorders. Prior research indicates that children in poverty with better academic performance and more depressive symptomatology tend to have higher temporal coupling between lateral frontoparietal network (LFPN; supports executive functions) and Default Mode Network (DMN; supports internally-directed thought) than lower-performing children in poverty, in direct contrast to the pattern observed for children above poverty. Thus, an open question is whether this pattern of connectivity adaptive for children in poverty has maladaptive long-term consequences, particularly for mental health.

**Objectives:** In this pre-registered study, we analyzed concurrent data from 8,091 children (1,307 in poverty) in the ABCD study at baseline (ages 9–10y). We performed linear mixed effects models to investigate whether both higher LFPN-DMN connectivity and grades are linked to more internalizing symptoms concurrently, and whether this differs for children above and below poverty.

**Methods:** We performed linear mixed effects models to investigate whether both higher LFPN-DMN connectivity and grades are linked to more internalizing symptoms concurrently, and whether this differs for children above and below poverty.

**Results:** We found that higher grades were associated with fewer internalizing symptoms for both children above and below poverty; this association was stronger for children below poverty. In addition, LFPN-DMN connectivity showed a significant negative correlation with internalizing symptoms at this age. However, when looking at internalizing symptoms separately - that is, anxiety/depression, withdrawal/depression, and somatic symptoms - we found that higher LFPN-DMN connectivity for children below poverty was associated with higher withdrawal/depression symptoms, but fewer somatic symptoms, pointing to a dissociation in what pattern of brain connectivity is most adaptive for the development of internalizing symptoms vs. physical health. These somatic symptoms highlight potential maladaptive consequences of resilience for children growing up in unequal structural conditions.

**Conclusions:** This research has important implications for supporting children in poverty by illuminating mechanisms for, and potential maladaptive consequences of, their resilience in academic contexts.

**Disclosure of Interest:** None Declared

## EPP0879

### White matter microstructure and local coherence of functional MRI in major depression

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**Introduction:** Anhedonia is a loss of pleasure and interest in activities and a core symptom of major depressive disorder (MDD). Diffusion tensor imaging studies show evidence for white matter (WM) alterations in the superior longitudinal fasciculus (SLF) of patients with MDD, already in the early stage of illness. SLF fibers extend from the parietal lobe to prefrontal regions that are important for attention, motivation, decision-making and reward processing.

**Objectives:** The present study focuses on the relationship between WM-integrity and anhedonia in patients with MDD. We hypothesize that WM-alterations are present in the SLF of depressed patients with motivational anhedonia.

**Methods:** Thirty-nine patients with MDD and 19 healthy controls matched for age and gender underwent diffusion-weighted magnetic resonance imaging. Voxel-wise statistical analysis of fractional anisotropy (FA) data was performed using FSL-Tract-Based Spatial Statistics (TBSS) software. Whole brain voxel-wise comparison in local coherence (LCOR), a measurement of resting state fMRI connectivity strength between a given voxel and the neighbouring areas in the brain, were compared between patients and healthy controls. We used the sum value of item 1 and 7 of the Hamilton rating Scale for depression (HAM-D) and the CORE non-interactiveness value to assess motivational anhedonia.