Conclusions: Substance misuse in ADHD might result in smaller IFG, which is in line with findings in SUD-literature. A contribution of premorbid alterations, due to FH, could not be ruled out, particularly for IFG thickness. Future studies should further investigate the potential role of these regions in treatment and prevention strategies.

Disclosure: No significant relationships.
Keywords: Attention-deficit/hyperactivity disorder; Substance Use Disorder; Cortical thickness; Subcortical volumes

O181

Perceptual processing links autism and synesthesia: A twin study

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Introduction: Synesthesia is a non-pathological condition where sensory stimuli (e.g. letters or sounds) lead to additional sensations (e.g. color). It occurs more commonly in individuals diagnosed with Autism Spectrum Condition (ASC) and is associated with increased autistic traits and autism-related perceptual processing characteristics, including a more detail-focused attentional style and altered sensory sensitivity. In addition, autistic traits correlate with the degree of synesthesia (consistency of color choices on an objective synesthesia test) in non-synesthetes.
Objectives: We aimed to investigate whether the degree of synesthesia for graphemes is associated with autistic traits and perceptual processing alterations within twin pairs, where all factors shared by twins (e.g. age, family background, and 50-100% genetics) are implicitly controlled for.
Methods: We investigated a predominantly non-synesthetic twin sample, enriched for ASC and other neurodevelopmental disorders (n=65, 14-34 years, 60% female), modelling the linear relationships between the degree of synesthesia and autistic traits, sensory sensitivity, and visual perception, both within-twin pairs (22 pairs) and across the entire cohort.
Results: A higher degree of synesthesia was associated with increased autistic traits only within the attention to details domain, with sensory hyper-, but not hypo-sensitivity and with being better in identifying fragmented images. These associations were stronger within-twin pairs compared to across the sample.
Conclusions: Consistent with previous findings, the results support an association between the degree of synesthesia and autistic traits and autism-related perceptual features, however restricted to specific domains. Further, the results indicate that a twin design can be more sensitive for detecting these associations.

Disclosure: No significant relationships.
Keywords: autism spectrum condition; synesthesia; twin design; sensory processing

O182

The effects of recreational use of marijuana in adolescent brain health: A review

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Introduction: Marijuana is widely used among people, recreationally and medically. However, recent studies have shown that Marijuana has negative effects on brain structures and functions.
Objectives: To discuss the effects of Marijuana use on brain development in adolescence.
Methods: The method that is used in this study is literature review, through analyzing and summarizing the data that were collected from PubMed, epidemiology articles from BNN and CDC, and other online journals to understand the effects of Marijuana on the brain development in adolescence. There were 25499 articles that were filtered and screened resulting in 10 articles that were used as data of this literature review.
Results: Marijuana effects on the brain are divided into structural changes and functional changes. Structural changes are seen in the brain hemispheres, amygdala, hippocampus, and nucleus accumbens. While functional changes are seen in behavioral and cognitive changes in everyday life and even psychotic disorders.
Conclusions: Marijuana use has shown negative effects on the human body, organs that are rich in cannabinoid receptors, especially the Brain. Therefore, Marijuana use among adolescents may disrupt their developing brain, and cause adolescents to have structural and functional changes in the brain.

Disclosure: No significant relationships.
Keywords: Marijuana; adolescent; Brain

O183

Predictive biomarkers for negative symptoms in schizophrenia

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Introduction: Increasing evidence shows that impaired neuroplasticity and high inflammation play a crucial role in the pathophysiology of schizophrenia. Prospective studies demonstrated that patients with high inflammation usually have a poor treatment response and clinical practice learns that negative symptoms are challenging to treat. The predictive value of biomarkers for negative symptoms in patients with schizophrenia has sparsely been explored.
Objectives: Here, we investigated whether biomarkers are associated with negative symptoms at baseline, and whether biomarkers could predict negative symptoms after six years in patients with schizophrenia.

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