regulation may be effective in preventing these negative life outcomes, and that early prevention and intervention targeted at improving self-control may reduce the risk of a broad array of psychiatric and social problems, including addiction. Indeed, several recent large-scale systematic reviews have suggested that self-regulation skills are malleable and can be learned through instruction and practice, and perhaps most so in the early years, roughly around 3 to 6 years, when there is a steep increase in learning curve, when the plasticity of the brain is still high, and when self-regulation skills are still very much in development.
This presentation provides an overview of the rationale and study findings of early prevention of substance use disorders and other mental health disorders. In terms of broad prevention, much can be gained by widespread, consistent implementation and normalization of early prevention at the pre- and elementary school level.

Disclosure of Interest: None Declared

S0116

Peripheral inflammation relationships with cognitive deficits and genetic factors in psychosis

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Abstract: Elevated peripheral inflammation is common in psychosis. Impairments in general cognition were linked to elevated C-reactive protein (CRP) and other inflammatory markers in patients with psychotic disorders. Whether there is a subgroup of persons with elevated peripheral inflammation demonstrating deficits in specific cognitive domains remains unclear. While molecular underpinnings of altered inflammation in psychosis are hypothesized, genetic contributions to relationships of psychosis, inflammation, and cognition have not been clarified. Thirteen peripheral inflammatory markers and 17 neurobehavioral tasks were quantified in a subset of participants (129 psychosis, 55 healthy controls-HCs) from the Bipolar-Schizophrenia Network on Intermediate Phenotypes (B-SNIP) consortium. Principal component analysis resulted in 5 inflammation factors across inflammatory markers. Three latent cognitive domains (Visual Sensorimotor, General Cognitive Ability, and Inhibitory Control) were characterized based on the neurobehavioral battery. Hierarchical clustering identified a psychosis subgroup with elevated inflammation and worse cognitive performance. Genetic predispositions to schizophrenia and cognition were explored in relation to inflammation. Among persons with psychosis, higher inflammation indices were associated with impairments of Inhibitory Control and Visual Sensorimotor function. Greater deficits in Inhibitory Control were observed in a high inflammation patient subgroup. Consistent with previous studies, global genetic correlations of schizophrenia, CRP, and cognition were observed. Significant bivariate local genetic correlations of CRP with schizophrenia or cognition across 22 loci with several genes in 1 locus on chromosome 3 suggested pleiotropic mechanisms for inflammatory relationships with cognition and psychosis. Specific neurobehavioral domains may be more sensitive to inflammation dysregulation in psychosis as compared to general cognitive function, particularly performance on tasks requiring ongoing behavioral monitoring and control. These, along with evidence of genetic correlations of CRP, psychosis, and cognition, provide further supporting evidence that inflammation dysregulation is an important underlying mechanistic contributor to the disruption of cognition in psychosis. Targeting this dysregulation may be an avenue for novel therapeutics to improve cognitive outcomes in these patients.

Disclosure of Interest: None Declared

S0117

Bullying prevention as a preventive strategy for mental health

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Abstract: Bullying constitutes a major public health concern, on account of its high prevalence rates and its association with a wide range of adverse health outcomes across the lifespan, including increased incidence of mental disorders such as depression, anxiety, and psychotic disorders. Previous research suggests effectiveness of school-based programmes in reducing bullying prevalence and improving mental health outcomes in children and adolescents. Despite the fact that some subpopulations such as young people with special educational needs are at increased risk for both bullying victimisation and mental health difficulties, there is little information on the effectiveness of universal school-based programmes in these high-risk populations. We will review available evidence of the effectiveness of school-based anti-bullying interventions as a tool to improve youth mental health, including results from a cluster-randomised clinical trial conducted in 20 publicly funded schools in Madrid to test the effectiveness of a 12-week web-enabled, user-friendly, school-based, preventive programme incorporating universal and targeted components (LINKlusive; ISRCTN15719015) and discuss the potential implications, challenges, and unmet needs of such approaches.

Disclosure of Interest: None Declared

S0118

A machine learning approach on whole blood immunomarkers to identify an inflammation associated psychosis onset subgroups

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Abstract: Psychosis onset is a transdiagnostic event that leads to a range of psychiatric disorders, which are currently diagnosed through clinical observation. Since several years, the role of immune system in the pathophysiology of psychosis has been well-recognized, showing differences from the onset to chronic

phases. In this lecture, I will show the results of our recent study that tested the hypothesis of the existence of subgroups of first-episode psychosis (FEP) patients identified by distinct peripheral immunomarkers' profiles, possibly underpinning a subgroup-specific immunopathogenesis. More in detail, I will show the results obtained by the unsupervised machine learning model that we applied to the set of 12 peripheral blood immune gene transcripts, which we recently demonstrated to classify with high accuracy a cohort of FEP patients and HC. Also, I will report the results obtained by performing post-hoc univariate analyses using selective clinical, cognitive, and brain structural phenotypes of FEP patients and HC belonging to each subgroup identified by the computational model. I will extensively discuss two key clusters identified and validated by our model: 1) a FEP cluster characterized by the high expression of inflammatory and immune-activating genes; 2) a cluster consisting of an equal number of FEP and HC subjects, which did not show a relative over or under expression of any immune marker (balanced subgroup). Therefore, in this lecture I will emphasize that our study has been the first to demonstrate the existence of a psychosis onset subgroup identified by a peculiar multivariate pattern of immunomarkers, independently of clinical features or categorical diagnosis. This is paramount as if validated in independent samples, our clustering model could enable the sample selection in clinical trials aiming to test the efficacy of novel immunomodulant or anti-inflammatory therapies tailored to the specific inflammatory subgroup of psychotic patients.

Disclosure of Interest: None Declared

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