

in the right eye. There was an inverse relationship between FAST score and RFNL thickness of the TS and N segments of the left eye.

Conclusion: There is a relationship between impairment of functional status and thinning of the retinal nerve fiber layer of the left eye.

F21 | Bio young—The affective disorder onset study in adolescents

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Introduction: Although bipolar disorder (BD) is increasingly prevalent in adolescents, it is infrequently diagnosed at onset. Lag in diagnosis and treatment may have negative impacts on development and prognosis. Therefore, the objective of this study is to identify biomarkers of BD to inform diagnosis and provide biological targets for the development of new and personalised treatments.

Method: Extending the BIO study, in the BIO-Young study we will investigate adolescents between 15 and 18 years of age with the aim of identifying a composite blood-based biomarker and a neurocognitive signature of BD.

We will evaluate candidate peripheral biomarkers and perform neurocognitive tests and functional and structural magnetic resonance imaging to evaluate alterations in frontotemporal cortical volume and fronto-limbic emotion regulation circuitry activation.

Results: We will include 30 adolescents with BD, 30 children with unipolar disorder, 30 healthy siblings, and 30 typically developing adolescents. Preliminary results will be presented at the conference.

Conclusion: This is the first study to compare adolescents with BD to adolescents with unipolar disorder, the first to include healthy siblings and additionally the first multidisciplinary study to combine assessment of peripheral biomarkers, neurocognitive measures and brain imaging in adolescents with BD.

This study may provide important knowledge regarding composite biomarkers in adolescents with BD disorder and inform diagnostic procedures, especially those involving early onset BD disorder.

F22 | Daily variation of cognitive, affective and somatic factors that are related to mood disorders in adolescents

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Introduction: Depression and Bipolar Disorder are prevalent during the adolescence period and they have been related to disruptions on the circadian system. More recently, emergent frameworks like the NIMH Research Domain Criteria advocate for an integrative approach in mental health illness, including the study of circadian rhythms.

Method: The Mood Rhythm Instrument—Youth Version (MRhl-Y) was applied to 171 adolescents between 12-17 years old. The MRhl-Y is a self-reported questionnaire that assesses perceived rhythms of mood symptoms through perceived peaks, and their time, in 24 hours during the past 15 days. This instrument is composed of fifteen questions classified into three domains: cognitive (attention, solving problem, alertness, concentration, memory, motivation to exercise), affective (sadness, irritability, anxiety, self-esteem, irritability, pessimism, motivation to talk with friends) and somatic (sleep, appetite, sexual arousal). The perceived daily peak was compared between different ages and sexes to evaluate if the rhythmicity could be affected by these parameters.

Results: We found that the perceived rhythmicity and its mean peak time can be influenced by age and sex. Younger adolescents presented lower self-reported rhythmicity scores than older groups.

Conclusion: This result reinforces that the knowledge regarding mood rhythm is a new and promising area to be explored. A better understanding of mood rhythms could contribute to the diagnosis and treatment of mood disorders in this age range.

F23 | Examining bipolar spectrum disorders in an epidemiological sample of children

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Introduction: Bipolar spectrum disorders (BSD) affect as many as 3.9% of children, but remain understudied. Nationally representative datasets are a potential remedy for this dearth of information. In 2013, investigators developed a new measure to address assessment issues of BSD, and recruited participants representative of the U.S. Census. This project presents base rates and clinical characteristics.

Method: Participants were parents of youth aged 5-18 (N = 1349) matching the 2010 U.S. Census, stratified on sex, race/ethnicity, and



geographic region. Parents completed measures of mood symptoms, pubertal status, and developmental and family history.

Results: 0.7% of youth were diagnosed with BSD (mean age = 11.4, SD = 4.23). BSD cases were 56% male, 67% white and non-Hispanic (78%); 33% had attempted suicide. Primary caregivers were largely mothers (67%); 44% had not graduated high school. Comorbidities were depression (44%), ADHD, intermittent explosive disorder, ODD, CD (22% each), and anxiety or borderline (11% each). Diagnostic groups differed significantly on gender, age, and number of comorbidities (all $P < .0005$). Youth with BSD were more likely to be male, older than the average sample age, younger than children with depression, and have more comorbidities. No youth with BSD had parents diagnosed with BD, but 3 parents had died by suicide.

Conclusion: The BSD prevalence in this sample is consistent with epidemiological meta-analyses, suggesting rates in the general population are not increasing. Most cases with BSD had comorbid diagnoses and family histories/traumas, and significantly different demographic/comorbidity characteristics than youth with other disorders. Findings replicate prior research in BSD using a nationally representative sample, emphasizing the condition's severity.

F24 | Relationship between computer game addiction and low mood in 8-year-old children

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Introduction: Various digital technologies are increasingly being introduced into the everyday life of children. It is possible that digital addiction has negative effect on psychosocial functions of children. What kind of specific effect does this new "digital environment" have for children? The goal of this research is to check the hypothesis that there is relationship between computer game addiction and low mood in 8-year-old children.

Method: We used questionnaire for parents to reveal children with computer game addiction. Experimental group consisted of 30 8-year-old children with computer game addiction. Control group consisted of 30 children without computer game addiction. The children from experimental and control group were matched for gender. We used Revised Children's Anxiety and Depression Scale (RCADS) for assessment of separation anxiety disorder, social phobia, generalized anxiety disorder, panic disorder, obsessive compulsive disorder, and low mood (major depressive disorder) in children (Child Self-Reported).

Results: We used Spearman correlation. Analysis has revealed the significant ($P < .05$) positive correlation between level of computer game addiction and low mood in children. However, we did not find the correlation between level of computer game addiction and other scales of RCADS.

Conclusion: It can be assumed that there is relationship between computer game addiction and low mood in 8-year-old children.

However, we need to do additional research using experimental design to approve the hypothesis that computer game addiction can cause the low mood in children.

F25 | A bipolar spectrum disorder including physical diseases is possible: Subtypes and family history

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Introduction: The aim of this study is to investigate family history of diabetes, ischemic heart disease, thyroid disease and cancer (leukemia, lymphoma, breast, prostate and gastrointestinal cancers) cerebrovascular disease, and epilepsy in bipolar patients.

Method: In this study, 287 patients admitted to our outpatient unit between January 2018-January 2019, diagnosed with bipolar disorder according to DSM-V and gave informed consent are cross-sectionally and consecutively evaluated. Each patients is questioned regarding family history of diabetes, ischemic heart disease, thyroid disease, cancer (leukemia, lymphoma, gastrointestinal cancers, breast and prostate cancer), cerebrovascular disease and epilepsy for first- and second-degree relatives separately.

Results: Diabetes, ischemic heart disease, cancer (leukemia, lymphoma, gastrointestinal cancers, breast and prostate cancer), cerebrovascular disease and epilepsy are more common in the family history than in bipolar patients. A strong correlation is found between family history (+) epilepsy and bipolar disorder with psychotic symptoms. Also, a correlation is found between family history (+) diabetes and seasonal course and family history (+) thyroid disease and comorbid anxiety disorder.

Conclusion: This study is the first study to investigate the frequency of family history (+) physical diseases in bipolar disorder. While investigating multiple pathogenesis, our current therapeutic goals are between common leading pathways and symptoms. It is the interactions between stress and neural circuits that under the pathophysiology and should be determined as the target treatment.

F26 | Comorbid physical illnesses and depression severity in patients with mood disorders in an online study

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Introduction: Major depressive disorder (MDD) and bipolar disorder (BD) share risk factors with comorbid medical conditions. We examined this association in a sample enrolled in a large, online study of physical activity.