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**Introduction:** Suicide is a serious public health problem since it accounts for nearly 900,000 deaths each year worldwide. Globally in 2019, 10.7 persons out of 100,000 died by suicide. Psychiatric disorders are related to an overwhelming proportion of these cases. In the last years, several specific interventions and action plans for suicide prevention have been implemented in a number of European countries.
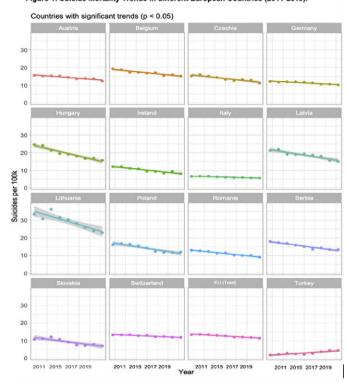
**Objectives:** Our aim was to analyze recent epidemiologic trends of suicide mortality rates in Europe.

**Methods:** Annual national statistics of suicide mortality rates derived from Eurostat public databases from 2011 to 2019 were analyzed for 38 European countries. The suicide mortality rate was estimated per year/100,000 population. Linear regression models were used to study temporal trends of suicidal mortality. Analyses were performed using RStudio.

**Results:** Available data show a statistically significant reduction in suicide mortality rates from 2011 to 2019 in 15 European countries, and a significant increase for Turkey (ES=0.32, SD=0.06, p=0.037) (Fig 1). The greatest significant decrease was reported in Lithuania (ES=-1.42, SD=0.02, p=0.02), followed by Hungary (ES=-1.13, SD=0.11, p=0.0007), Latvia (ES=-0.76, SD=0.11, p=0.007), and Poland (ES=-0.73, SD=0.10, p=0.001). Italy reported the lowest significant reduction in suicide mortality rates (ES=-0.13, SD=0.018, p=0.003). The remaining 16 countries showed no significant changes in suicide mortality trends.

**Image:**



Figure 1: Suicide Mortality Trends in different European Countries (2011-2019).

**Conclusions:** In the last years, Europe registered an overall reduction in reported suicide rates. However, more recent data (i.e., suicide rates after COVID-19 pandemic, age and sex-related effect on suicide rates) should be analyzed and used to implement future recommendations. Current and future suicide prevention strategies aim to contribute to a greater reduction of suicide rates in the different European countries.

**Disclosure of Interest:** None Declared

**O0060**

### Exploring the association among the tryptophan to serotonin and kynurenine pathways, cognition and suicidal behaviour: a secondary analysis in a sample of individuals affected by Bipolar Disorder.

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**Introduction:** Stroop test iteration performances and metabolism of tryptophan (TRP) via serotonin (5-HT) and kynurenine (KYN) have both been associated with suicidal behaviors. This study aims to probe their possible interactions.

**Objectives:** We explored the association of the performances on the Emotion Inhibition Subtask (EIS) of the Brief Assessment of Cognition for Affective Disorder and the plasmatic levels of 5-hydroxytryptophan (5-HTP), 5-HT, KYN, melatonin (MLT) among subjects with Lifetime Suicidal Ideation (LSI) vs non-LSI, and with Lifetime Suicide Attempts (LSA) vs non-LSA.

**Methods:** Using R studio, we employed: 1) the t-test for parametric data and the Wilcoxon test for non-parametric data; 2) Linear Modeling to probe the associations of EIS performances with MLT, KYN, 5-HTP or 5-HT plasmatic levels.

**Results:** In a sample comprising 45 individuals affected by Bipolar Disorder, we found a statistically significant difference for the Color Naming (CN, image 1) and the Neutral words (NW) subtasks among LSA vs non-LSA. In LSI vs non-LSI, only the NW retained significance, but not the CN. A significant association emerged between CN and 5-HTP in LSI but not in non-LSI (image 2). Similarly, in LSA, an association was found between CN and 5-HTP, but not in non-LSA (image 3). No statistically significant difference emerged among groups regarding gender composition, age, pharmacological therapy, Body Mass Index, Hamilton Depression Rating Scale, Young Mania Rating Scale, or Clinical Global Impression scale - Severity.
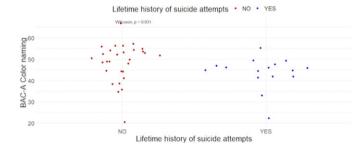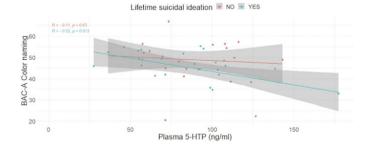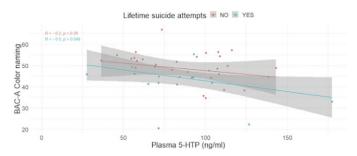
**Image:**



**Image 2:**



**Image 3:**



**Conclusions:** We found that the plasmatic levels of the metabolites of TRP via 5-HT were correlated to some EIS performances. These findings may represent a hypothesis-generating platform for further investigations.

**Disclosure of Interest:** None Declared

## O0061

## Predictors of Suicidal Ideation and Preparatory Behaviors in patients With Bipolar Disorder: The Contribution of Chronobiological alterations and Its Association With Hopelessness

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**Introduction:** Bpolar disorder (BD) is a severe and chronic psychiatric disorder it is the sixth leading cause of disability among all illnesses worldwide. With regard to causes of premature mortality, patients with BD are at very high risk of suicide. Whereas risk factors for suicidal behaviors are multiple and complex, hopelessness appears to be a major independent risk factor for suicidality in BD. Compelling evidence has also demonstrated that BD is frequently associated with circadian rhythms alteration, contributing to its vulnerability, pathogenesis, and manifestations. in particular in the desynchronization of sleep and social life, has been associated with the severity of BD. Indeed hopelessness has never been studid in relation to circadian rhythms in BD

**Objectives:** To examine the role of chronobiological rhythm alterations in suicidal ideation and behaviors and its relation with hopelessness.

**Methods:** One hundred twenty-seven patients (77 females, mean age of 47.4 ± 12.5 years) with a major depressive episode and bipolar disorder (BD) type I or II (according to Structured Clinical Interview for DSM-5 assessment) were recruited in 2019 and assessed for depressive and manic symptoms (Beck Depression Inventory-II, Young Mania Rating Scale) and with the Biological Rhythms Interview of Assessment in Neuropsychiatry, Beck Hopelessness Scale, and Scale for Suicide Ideation. Univariate regression and mediation analyses were performed.

**Results:** Forty-one patients (32.3%) showed clinically significant suicidal ideation and were more frequently affected by BD type I ($P = .029$) with mixed features ($P = .022$). Compared to nonsuicidal