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**Introduction:** Insomnia is one of the most common major health issues during the COVID-19 pandemic. There has been limited evidence that showed the correlation between insomnia and COVID-19 using Google trend.

**Objectives:** To investigate the impact of the COVID-19 pandemic on interest in insomnia, including national mental health by a Google trend analysis that implicitly represents the state of distress and concern for this pandemic.

**Methods:** We examined the Google trend search query data from these sleep-related keywords: insomnia, restless leg, and obstructive sleep apnea (OSA) from 1 Jan 2020 to 30 May 2020 and explored the correlation between the internet search volumes for insomnia and the cumulative number of new COVID-19 cases. In addition, we investigated the internet search pattern over time, before and during the COVID-19 pandemic.

**Results:** During the early phase of the COVID-19 pandemic between January and May 2020, the Relative Search Volumes (RSV) curves showed that the cumulative number of new COVID-19 cases was significantly correlated with the rising search for these keywords linking to sleep-related conditions as follows: 'insomnia' ( $r = 0.41$ ,  $p < 0.001$ ), and 'restless leg' ( $r = 0.19$ ,  $p = 0.009$ ). However, it was not correlated with the keyword 'OSA' ( $r = -0.14$ ,  $p = 0.07$ ).

**Conclusions:** These findings emphasize the impact of the COVID-19 pandemic on insomnia and the crucial need for public mental health interventions to be offered and accessible. The Google trend could be used as a new tool for public mental health surveillance in a new normal lifestyle.

**Disclosure:** No significant relationships.

**Keywords:** Insomnia; sleep; Covid-19; Google trend

## EPP0744

### The role of sleep quality in psychotic-like experiences

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**Introduction:** Impaired sleep quality is among the most common complaints in psychopathological conditions including psychotic states. The clinical relevance of sleep disruption is, however, notoriously overlooked and considered as a secondary symptom that automatically ameliorates if the mental problem is adequately treated. Nevertheless, research findings indicate that sleep quality has a causal role in the occurrence and maintenance of psychotic states, and instead of being merely the "nocturnal impact" of an underlying mental disorder, shows bidirectional associations with mental health complaints.

**Objectives:** Although the majority of studies examined the links between sleep and psychosis by cross-sectional assessments, sleep quality and psychotic-like experiences both fluctuate from night to night and day to day, respectively, even in non-clinical populations. The prospective assessment of these variables hence allows for the analyses of the temporal (and intraindividual) associations between sleep and psychosis. In our studies, we examined the temporal, bidirectional associations between sleep quality and psychotic-like states.

**Methods:** Across three experience sampling studies with participants from the general population ( $N = 73 / 166 / 60$ ), we assessed sleep quality and daytime psychotic-like phenomena every day for at least two weeks. Using mixed-effects models, we examined if sleep quality predicted psychotic-like experiences the following day, and also if psychotic-like experiences predicted sleep quality the following night.

**Results:** Our findings consistently highlight the dominant direction of prediction from sleep to daytime psychotic-like experiences, whereas the inverse direction is not supported by enough evidence.

**Conclusions:** Individuals at risk for psychosis could benefit from sleep-specific interventions that could be integrated into treatment protocols.

**Disclosure:** No significant relationships.

**Keywords:** sleep; psychosis; mood; anxiety

## Bipolar Disorders 03 / Ethics and Psychiatry

### EPP0746

#### Focus on neuroenhancement: a systematic review and its ethical implications

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**Introduction:** Pharmacological and cognitive neuroenhancement refer to the non-medical use of prescription drugs, alcohol, illegal drugs, or the so-called soft enhancers, to enhance cognition, mood, work or school performance, or to promote pro-social behaviour. Literature on the topic is meagre, and available data only partially enlightens their use.

**Objectives:** The aim of this paper is to review and comment on the available literature on pharmacological neuroenhancement and, secondary, on emotional enhancement.

**Methods:** A systematic review was conducted according to the PRISMA guidelines. Pubmed, Scopus, Embase, PsychInfo and Google Scholar databases were accessed to select English language articles, published from 1980 to April 2020. 11746 papers were initially selected and 123 papers were finally included.

**Results:** Available literature indicates a widespread and increasing use of different kinds of substances, drugs and food supplements mainly with neuroenhancing purposes, especially amongst specific populations of young healthy subjects. The evidence regarding their efficacy is controversial. Further, a limited or no awareness

regarding the possible consequences of their abuse/misuse emerges amongst users.

**Conclusions:** Despite the limited evidence that some substances may improve cognitive functions in healthy subjects and neglecting their detrimental side effects and potential risk of misuse, abuse and addiction, there is an increasing worldwide use of the so-called neuroenhancers, especially in some categories of individuals, such as university students. Further studies are needed to collect reliable data on the effects of neuroenhancers in healthy subjects. Neuroenhancement puts into question the concept of authenticity, so that the problem requires to be analyzed within a complex ethical conceptual frame.

**Disclosure:** No significant relationships.

**Keywords:** Ethics; neuroenhancement; emotional enhancement; psychopharmacology

### EPP0748

#### Endocrine biomarkers related to sleep-wake cycle and sleep disturbances in patients with bipolar disorder: A systematic review

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**Introduction:** Sleep and circadian disturbances have been widely studied in patients with bipolar disorder (BD) (Duarte Faria et al., 2015; Gonzalez, 2014). However, there is no clear evidence about the role of peripheral biomarkers of circadian cycle in this population.

**Objectives:** This systematic review aims to identify potential endocrine biomarkers of circadian rhythm in blood and study their relationship with sleep problems in BD.

**Methods:** An electronic search of Pubmed and PsycInfo databases were performed. It includes articles about the topic from 1991 to 2021. The search strategy was: ("Peripheral biomarkers" OR "biological markers" OR biomarker OR cortisol OR melatonin OR orexin OR hypocretin) AND (blood OR serum OR plasma) AND ("sleep-wake" OR "circadian rhythm" OR sleep OR insomnia) AND "bipolar".

**Results:** 92 records were obtained after excluding duplicates. Only five studies met the inclusion criteria (n = 499; BD = 125; unipolar depression = 148; schizophrenia = 80; controls = 146). The endo-

crine parameters analyzed were: cortisol (3 studies), melatonin (1 study) and orexin-A (1 study). Overall, no significant associations between these biomarkers and sleep disturbances, assessed with subjective (psychometric evaluation) and/or objective (polysomnography) measures, were detected.

**Conclusions:** This systematic review highlights the lack of studies that explore the role of endocrine biomarkers related to circadian function in the pathophysiology of sleep disturbances in BD.

**Disclosure:** No significant relationships.

**Keywords:** circadian rhythms; sleep disorders; orexin; melatonin

### EPP0749

#### Medically unexplained somatic symptoms and its association with functionality and childhood trauma in type-1 bipolar disorder

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**Introduction:** Somatic symptoms with the heterogeneous character that are not fully explained by a medical condition are common in bipolar disorder (BD) which might interfere with the choice of treatment, health care utilization, medical costs as well as functionality.

**Objectives:** The purpose of this study was to evaluate somatic symptoms in remitted type 1 BD and to examine the association of somatization, functionality, and childhood trauma which is a known mediator of adult somatization.

**Methods:** After excluding patients with medical comorbidities, 61 patients diagnosed with BD type-1 according to the Diagnostic and Statistical Manual of Mental Disorders-V (DSM-V) participated in the study. We required at least 8 weeks of remission and confirm it with Hamilton Depression Rating Scale (HDRS) and Young Mania Rating Scale (YMRS). Somatization Scale, Functioning Assessment Short Test (FAST) and Childhood Trauma Questionnaire (CTQ) were administered to the participants.

**Results:** Somatization scores were significantly correlated with CTQ ( $r=.310$ ,  $p=.016$ ), FAST- total ( $r=.307$ ,  $p=.016$ ), FAST-financial issues ( $r=.357$ ,  $p=.005$ ) and FAST-interpersonal relationships ( $r=.320$ ,  $p=.012$ ) subscale scores while inversely correlated with years in education ( $r=-.305$ ,  $p=.017$ ). When a partial correlation was run to determine the relationship between somatization and functioning whilst controlling for childhood trauma, there was no statistically significant correlation between somatization and functioning ( $p=.076$ ).

**Conclusions:** Our study suggests childhood trauma may have a major influence on the relation between somatization and functionality in patients with type- 1 BD. When addressing physical symptoms in patients with type-1 BD, an integrated approach including childhood trauma should be considered.

**Disclosure:** No significant relationships.

**Keywords:** somatic symptoms; Childhood Trauma; bipolar disorder; functionality