these core symptoms, ADHD seems to present complex associations with certain personality traits and to share several clinical features with personality disorders (PDs), particularly those within Cluster B. This overlap of symptomatology may lead to diagnostic challenges and potential misdiagnoses. This paper reviews the literature on the relationship between ADHD and personality traits, highlighting overlaps with personality disorders and exploring their clinical and diagnostic implications.
Objectives: The primary objective of this review is to understand the potential associations between ADHD and specific personality traits, focusing on the extent to which these traits overlap with clinical features of personality disorders.
Methods: A non-systematic literature review was conducted using major databases such as PubMed, Wiley and ScienceDirect targeting peer-reviewed studies published over the last two decades. The search terms included "ADHD," "personality traits," "personality disorders," and "diagnostic overlap." Relevant studies were selected based on their focus on adult ADHD and its association with personality traits and personality disorders. Review articles and cross-sectional studies were included.
Results: The currently available literature reveals significant associations in the clinical presentation of ADHD and specific personality traits (changing accordingly to different models of personality assessment), as well as a relevant diagnostic overlap with Cluster B personality disorders, particularly Borderline Personality Disorder (BPD) and Antisocial Personality Disorder (ASPD). Shared features include impulsivity, emotional dysregulation, and difficulty in maintaining relationships. The presence of ADHD seems to increase the likelihood of personality pathology, with some studies suggesting a high co-occurrence of ADHD with traits of increased neuroticism and novelty-seeking, and decreased conscientious inhibition.
Conclusions: ADHD and personality disorders share multiple overlapping clinical features, making accurate diagnosis challenging and potentially delaying adequate treatment. Thus, as suggested in some of the articles reviewed, an integrative and dimensional approach to such clinical pictures may be more adequate, so to ensure a profound understanding of the difficulties presented by patients, aiming at providing accurate and tailored treatment. Further research is needed to refine diagnostic criteria and strengthen a standardized dimensional thinking to address this diagnostic ambiguity.

Disclosure of Interest: None Declared

Psychoneuroimmunology

EPP501

THE ASSOCIATION OF SALIVARY BIOMARKERS WITH SELF-COMPASSION AND PERFECTIONISM IN MEDICAL STUDENTS EXPOSED TO PRE-EXAM STRESS

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doi: 10.1192/j.eurpsy.2025.755

Introduction: Evidence has shown that perfectionism is linked with increased perceived stress, whereas self-compassion might mitigate poor outcomes related to stress. However, how these traits influence stress responses in a naturalistic setting is unclear.
Objectives: The study aims to test the associations of perfectionism and self-compassion traits with stress-related biomarkers, namely C-reactive protein (CRP), alpha-amylase, and cortisol, in medical students exposed to pre-exam stress.
Methods: 61 second-year medical students were enrolled in this study. At baseline, perfectionism and self-compassion were self-rated using the Self-Compassion Scale and the Short-Revised Almost Perfect Scale, respectively. Morning saliva samples were collected at baseline and one week before the exam. The levels of salivary CRP, alpha-amylase, and cortisol were quantified as biomarkers for inflammation, sympathetic activity, and hypothalamus-pituitary-adrenal axis, respectively, using enzyme-linked immunosorbent assay. Multiple linear regression analysis was performed to test the associations between the two traits with pre-exam salivary biomarkers, adjusted for baseline salivary biomarkers, age, sex, and body mass index (BMI). Other potential confounding variables, including acute illness, underlying mood disorder, and lifestyle factors, were also added to the model as sensitivity analyses.
Results: Adjusted for the baseline level of biomarker, age, sex, and BMI, perfectionism traits significantly predicted pre-exam salivary alpha-amylase (B = 0.04, 95% CI 0.01 to 0.07, p = .007), but not CRP (B = -0.03, 95% CI -0.07 to 0.01, p = .177) or cortisol (B = 0.004, 95% CI -0.005 to 0.012, p = .424). No significant associations were found between self-compassion traits and the pre-exam levels of all three salivary biomarkers. The sensitivity analysis, additionally adjusted for other potential confounding factors, confirmed the significant positive association between perfectionism traits and pre-exam salivary alpha-amylase (B = 0.04, 95% CI 0.01 to 0.07, p = .006).
Conclusions: Perfectionism traits could positively predict the level of morning salivary alpha-amylase in naturalistic stress exposure, suggesting a heightened sympathetic activity among those with high perfectionism in response to stress. Replication studies in a larger sample with more diverse populations are warranted.

Disclosure of Interest: None Declared

Psychopharmacology and Pharmacoeconomics

EPP502

Impact of Grapefruit Consumption on Plasma Concentrations of Psychiatric Medications through CYP3A4 Inhibition

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doi: 10.1192/j.eurpsy.2025.756

Introduction: The interaction between grapefruit juice and certain psychiatric medications can lead to significant clinical implications due to the inhibition of the cytochrome P450 3A4 (CYP3A4) enzyme (Fuhr et al. CPT 2023, 114(2), 266-275; Guttman et al. Phytother. Res 2020, 34(5), 1168-1176; Paine et al. Drug Metab. Dispos 2004, 32(10), 1146-1153; Paine et al. J. Pharmacol. Exp. Ther 2005, 312(3), 1151-1160; Schmiedlin-Ren et al. Pharmacol. Ther 1997, 66(2), 234-241). Grapefruit juice contains furanocoumarins, specifically bergamottin and 6',7'-dihydroxybergamottin

(DHB), which irreversibly inhibit CYP3A4, potentially increasing drug plasma concentrations and the risk of adverse effects (Bailey et al. CPT 1998, 64(3) 248-256; de Castro et al. J. Agric. Food Chem 2006, 54(7) 2498-2503; Row et al. J. Med. Chem 2005, 49(20), 6139-6146).
Objectives: This review aims to quantify the impact of grapefruit juice on the plasma concentrations of buspirone, carbamazepine, and diazepam and to understand the duration of these effects to better manage patient safety.
Methods: A comprehensive review of existing pharmacokinetic studies (Furukori et al. BJCP 2003, 55(3), 307-311; Lane et al. Psychopharm 2001, 155(3), 356-359; Tanaka et al. Clin. Pharm 2013, 52(5), 397-420; Wang et al. CPT 1993, 65(3), 314-321; Yasui et al. Psychopharm, 145(1), 84-87) was conducted to gather data on the effects of grapefruit juice on CYP3A4 substrate psychiatric medications. Quantitative increases in plasma concentration metrics (AUC and Cmax) were extracted, and the duration of the inhibition effect was analyzed.
Results: Buspirone plasma concentrations increased by 4.3-fold, with effects lasting 24 hours. Carbamazepine showed a 1.4-fold increase in AUC and a 1.2-fold increase in Cmax, with effects persisting up to 24 hours. Diazepam concentrations increased by 3-fold in AUC and 2-fold in Cmax, with an effect duration of 24 hours. No significant interaction was observed for clozapine and haloperidol.
Conclusions: Grapefruit juice significantly increases the plasma concentrations of buspirone, carbamazepine, and diazepam by inhibiting CYP3A4, with effects lasting up to 24 hours. Clinicians should educate patients on avoiding grapefruit consumption while on these medications and monitor for potential toxicity. Further research is needed to develop guidelines for managing these interactions and to explore genetic variations in response to grapefruit consumption.

Disclosure of Interest: None Declared

Psychoneuroimmunology

EPP503

Immune4Plasticity: do non-pharmacological interventions modulate the inflammatory pattern of major depressive disorder? A study protocol

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doi: 10.1192/j.eurpsy.2025.757

Introduction: Major depressive disorder (MDD) is a severe mental disorder with a prevalence rate of 10%. Approximately 30-40% of patients suffering from MDD show higher levels of proinflammatory cytokines, associated to low response to pharmacotherapy. Thus, modulation of immune system might have a key role in the management of MDD.
Objectives: This study is aimed to: 1) assess the interrelation between immune hyperactivation and neuronal plasticity; 2) assess how non-pharmacological treatments impact on the immune hyperactivity in patients suffering from MDD; 3) identify biological makers able to predict the course of MDD and the effectiveness of treatments.
Methods: Immune4Plasticity is a longitudinal, multisite trial funded by Italian Ministry of Health. Preclinical analyses aimed at investigating the interrelation between immune hyperactivation and neuroplasticity as well as the identification of biological markers of MDD will be carried out at National Institute of Health in Rome. Clinical part of the study will be performed at the Department of Psychiatry of University of Campania, Naples, and at the Vita-Salute San Raffaele University, Milan. Seventy patients aging 18-65, with a diagnosis of MDD according to the DMS-5 criteria without psychotic symptoms, scoring more than 14 at the 17-item Hamilton Depression Rating Scale and able to release informed consent will be included. Thirty-five participants will attend a lifestyle psychosocial intervention in Naples; thirty-five will undergo light-therapy sessions in Milan. Assessments of both groups will be performed at recruitment (T0), after 3 months (T1) and after 6 months (T2), by using standardized psychometric tools and blood samples. The project will be carried out for 24 months.
Results: This multidisciplinary, translational study will shed more light on the complex interrelationship between MDD, immune system and neuroplasticity by investigating the role of psychosocial intervention and light therapy as 'modulators'. This will make it possible to develop innovative therapeutic strategies by integrating non-pharmacological approaches with anti-inflammatory drugs and to identify new peripheral markers to assess the response to treatment of patients with MDD.
Conclusions: MDD is a complex mental disorder associated with higher expression of inflammation. Sometimes, it is not adequately responsive to pharmacotherapy. Understanding the effect of non-pharmacological treatments as "modulators" of the inflammatory pattern of MDD may be an important strategy to optimize clinical management of this disorder.

Disclosure of Interest: None Declared

Psychopharmacology and Pharmacoeconomics

EPP504

Lipopolysaccharide induced acute inflammation leads to a higher systemic and brain exposure to olanzapine in mice

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doi: 10.1192/j.eurpsy.2025.758

Introduction: Pro-inflammatory mediators inhibit drug metabolism and transport. Detailed knowledge is lacking on the mechanism and extent of alterations in olanzapine pharmacokinetics during acute inflammatory states accompanying infections.
Objectives: To quantify the extent of systemic and brain exposure to olanzapine in a murine model of endotoxemia compared to a non-endotoxemia model.