To sum up, promising results were obtained and it could be an important field for the OCD in terms of diagnostic, severity and treatment.

Disclosure of Interest: None Declared

EPP0198

Infections and obsessive-compulsive disorder - results from a systematic review and meta-analysis

N. Descalço[1,2,3*], R. D. Gomes[3], A. Maia[1,2,4],
B. Barahona-Corrêa[1,2], A. Oliveira-Maia[1,2] and J. Oliveira[1,2]

[1]Neuropsychiatry Unit, Champalimaud Research and Clinical Centre;
[2]NOVA Medical School, NOVA University of Lisbon, Lisbon;
[3]Psychiatry and Mental Health Department, Hospital Garcia de Orta,
Almada and [4]Department of Psychiatry and Mental Health, Centro
Hospitalar Lisboa Ocidental, Lisbon, Portugal
*Corresponding author.
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Introduction: Obsessive-compulsive disorder (OCD) is a psychiatric disorder affecting 1.3% of the population worldwide where both genetic and environmental factors, such as perinatal events and neuroinflammation, are thought to contribute to the etiology of the disorder. In the past, the description of clinical entities such as Pediatric Autoimmune Neuropsychiatric Disorder Associated with Streptococcal Infections (PANDAS), in which an acute neuropsychiatric syndrome with prominent obsessive-compulsive features emerges in children infected with *group-A beta-hemolytic streptococcus* (GABHS), sparked the hypothesis that infections may be a risk-modifying factor for the development of OCD. Along with streptococcal infections, other pathogens such as *Toxoplasma gondii* have been implicated in the pathophysiological models of the disorder, although causal associations have not been established for any of beforementioned pathogens.

Objectives: To perform a systematic review and meta-analysis about the presence of biological evidence of infection in patients diagnosed with OCD.

Methods: We conducted a systematic review and a meta-analysis (PROSPERO registration CRD42021223415) by performing a standardized electronic database search in MEDLINE/PubMed, Web of Science, Embase and Scopus. Search was conducted on 17/10/2022. Eligible papers included case-control and cohort studies using a comparator group, that tested for specific biomarkers providing evidence of infection in patients diagnosed with OCD; exclusion criteria included studies without quantitative or qualitative measures of infection, case reports, systematic or scope reviews, and animal studies. Selection process was conducted according to PRISMA 2020 statement guidelines. Study quality was assessed through Newcastle-Ottawa Quality Assessment Scale.

Results: We identified 8911 records through the search after duplicate removal. A total of 22 studies met inclusion criteria after selection process, and 15 were eligible for meta-analysis. Most evidence concerned *Toxoplasma gondii* (10 studies), and patients with OCD appear to have higher odds of being infected compared to controls, with a meta-analytic odds ratio of 2.39 (95% IC 1.60-3.58), when comparing 467 patients with 5411 controls. However, most studies were methodologically heterogeneous, which compromises the interpretation of meta-analytic results. Information regarding other agents, including GABHS, *Borna disease virus* and *Toxocara canis* was gathered but due to an insufficient number of papers it was not possible to perform a meta-analysis for each of them.

Conclusions: Our work suggests that albeit exhaustively reported in the literature, there is no strong evidence of the over-representation of biomarkers of infection in patients with OCD compared to control volunteers. Methodologically robust studies are needed to further test this hypothesis.

Disclosure of Interest: None Declared

EPP0199

fMRI neurofeedback leads to long-term symptomatic reduction in treatment-resistant patients with obsessive-compulsive disorder

S. Ferreira[1], M. Machado-Sousa[1], R. Vieira[1], R. Magalhaes[1],
A. Coelho[1], M. Picó-Pérez[1,2] and P. Morgado[1,3*]

[1]Life and Health Sciences Research Institute (ICVS), School of
Medicine, University of Minho, Braga, Portugal; [2]Departamento de
Psicología Básica, Clínica y Psicobiología, Universitat Jaume I, Castelló
de la Plana, Spain and [3]Hospital de Braga, Braga, Portugal
*Corresponding author.
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Introduction: Obsessive-compulsive disorder (OCD) is a severe condition with a profound impact on the health, social and professional functioning of the patients. More than one third of the patients do not achieve remission of the symptoms after first-line treatment with cognitive-behavioral therapy and selective serotonin reuptake inhibitor medication. Neurofeedback is a promising technique that allows the non-invasive self-regulation of neural activity associated with symptomatic manifestation. Previous literature reported preliminary evidence of positive effects of functional magnetic resonance imaging (fMRI) neurofeedback on OCD symptoms. However, these studies have small samples and/or were not controlled. Additionally, these studies did not involve treatment-resistant patients.

Objectives: We aim at developing a fMRI neurofeedback task to treatment-resistant OCD patients and to explore the underlying brain changes.

Methods: We implemented a sham-controlled double-blinded fMRI neurofeedback protocol to target hyperactivity in orbitofrontal regions in treatment-resistant OCD patients with contamination/cleaning symptoms. The protocol had two sessions of neurofeedback (72 min of total training). The patients included were under treatment-as-usual.

Results: Our preliminary results with the experimental group ($n = 10$ patients) demonstrated decreased OCD and stress symptoms three months after the neurofeedback sessions. Moreover, immediately after the neurofeedback sessions, we observed reduced functional connectivity between orbitofrontal and temporoparietal regions, and increased brain activity in dorsolateral prefrontal and premotor areas during symptomatic provocation. The brain functional changes might be associated with a better control over obsessions.

Conclusions: fMRI neurofeedback led to long-term symptomatic reduction in treatment-resistant patients with OCD. Our results need further validation with the sham-control group but highlight the efficacy of fMRI neurofeedback for refractory OCD and the necessity of prolonged neurofeedback protocols.

Disclosure of Interest: None Declared

EPP0200

Cognitive flexibility moderates the relationship between exposure to COVID stressors and obsessive-compulsive (OCS) symptoms

L. Albertella[1], C. Liu[1], R. S. C. Lee[1]*, L. Fontenelle[2], S. R. Chamberlain[3], M. Yücel[1] and K. Rotaru[4]

[1]Turner Institute for Brain and Mental Health, Monash University, Melbourne, Australia; [2]Obsessive, Compulsive, and Anxiety Spectrum Research Program, Institute of Psychiatry, Federal University of Rio de Janeiro, Rio de Janeiro, Brazil; [3]Department of Psychiatry, University of Southampton, Southampton, United Kingdom and [4]Monash Business School, Monash University, Melbourne, Australia
*Corresponding author.
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Introduction: Research suggests that the COVID-19 pandemic and related stressors have triggered OCS for many individuals. However, the extent to which the pandemic and related stressors have influenced OCS seems to vary by individual factors, with some individuals being at greater risk than others. Despite the well-known role of cognitive inflexibility as a marker of risk for OCS, no study to date has examined the extent to which it influences individual susceptibility to developing OCS during the current pandemic. Toward this aim, the current study examined whether cognitive flexibility moderates whether exposure to COVID-related stressors is associated with OCS. Research suggests that the COVID-19 pandemic and related stressors have triggered OCS for many individuals. However, the extent to which the pandemic and related stressors have influenced OCS seems to vary by individual factors, with some individuals being at greater risk than others. Despite the well-known role of cognitive inflexibility as a marker of risk for OCS, no study to date has examined the extent to which it influences individual susceptibility to developing OCS during the current pandemic.

Objectives: Toward this aim, the current study examined whether cognitive flexibility moderates whether exposure to COVID-related stressors is associated with OCS.

Methods: Participants were 169 students (age = 22 years, 62% female) from two student cohorts at Monash Business School who reported experiencing current OCS symptoms. All cohorts completed an online visual search task to measure flexibility of reward-related attentional capture (as an index of cognitive flexibility; measured using the VMAC-R task) and questionnaires gauging exposure to COVID-related stressors, pre-pandemic OCS, and current/lockdown OCS. A negative binomial regression examined the extent to which a) number of COVID-related stressors, b) cognitive flexibility, and c) their interaction was associated with lockdown OCS, adjusting for pre-COVID OCS.

Results: The interaction between COVID-related stressors and cognitive flexibility was significantly associated with OCS ($p = 0.048$). Follow-up analyses showed that this interaction was driven by exposure to COVID-related stressors being associated with greater OCS among individuals with high cognitive inflexibility scores only ($p = .029$). Among cognitively flexible individuals, we did not find a relationship between COVID-related stressors and OCS ($p = .470$).

Conclusions: The result of this study highlight the role of cognitive flexibility as a potential moderator between COVID events and OCS. Critically, these findings have implications for detecting who is at risk of developing OCS following exposure to COVID-related stressors, and suggest that future interventions aimed at modifying cognitive flexibility may hold promise for boosting resilience against the effects of COVID-related stressors on OCS.

Disclosure of Interest: None Declared

EPP0201

Body Dysmorphic Disorder (BDD): Prevalence in the general population of Pakistan and its association with social media usage

S. Azeem[1]*, A. Liaquat[2], Z. Huda[2], B. Mustafa[1], N. Iqbal[2], A. S. Ahmad[3], M. Adil[2], A. Ellahi[4] and S. M. A. Jahangeer Al'Saani[5]

[1]King Edward Medical University, Lahore; [2]Dow University of Health Sciences, Karachi; [3]Shalamar Medical and Dental College, Lahore; [4]Jinnah Sindh Medical University and [5]Community Medicine, Dow University of Health Sciences, Karachi, Pakistan
*Corresponding author.
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Introduction: Body Dysmorphic Disorder (BDD) is a psychiatric, obsessive-compulsive disorder characterized by persistent, pre-occupying, intrusive thoughts regarding defects in one's physical appearance. This leads to potentially harmful behaviors such as constant mirror checking, avoiding socialization, and the need to seek constant validation. The recent increase in social media usage and influence, especially the use of photo-editing apps, has been correlated with a steep decline in body satisfaction due to the perpetuation of unrealistic beauty standards.

Objectives: This study aimed to determine the current prevalence of BDD in the general population of Pakistan and assess the association of BDD with social media usage.

Methods: A descriptive cross-sectional study was conducted from August 2022 to October 2022 on the general population of Pakistan using an online self-administered, anonymous, pretested questionnaire. It contained socio-demographic factors (age, gender, marital status, educational discipline, and household income). Participants were screened for BDD using a pre-tested Body Dysmorphic Disorder Questionnaire (BDDQ) modified to fit the revised DSM-5 criteria. They were further asked about the specifics of the defects they were concerned about, and whether or not they compared their appearance with people online. Characteristics of social media use such as the types of applications used and time spent on them were also asked. Data was analyzed using SPSS v.26.

Results: Out of 779 participants, 5.3% (41) screened positive for BDD. The most repeated behaviors in BDD-positive participants were a comparison of how they looked with other people and checking themselves in the mirror to see how they look. Their most common defect of concern was skin (acne, scars, wrinkles, paleness, redness) followed by the shape or size of the nose, mouth, jaws, or lips. There was a significant association between age and BDD