

Methods: Data came from the 4554 participants (mean age=61.0 (SD=5.9) years; 74% men) from the Whitehall II Study who underwent repeated dietary intake assessment (food frequency questionnaire in 1991-1993, 1997-1999 and 2002-2004), and follow-up for recurrence of DepS (CES-D \geq 16 or use of antidepressants) over 13 years (2002-2004 and 2015-2016). The NOVA classification was used to estimate UPF intakes.

Results: Over 13 years of follow-up, 12.9% of participants reported having recurrence of DepS. Results of logistic regression models adjusted for potential confounders showed that high amounts of UPF intakes (top quintile versus the four last ones) increased the odds of recurrent DepS by 30 % (95%CI 1.05 - 1.61). Additional analyses suggested that UPF intakes did not attenuate much the overall diet quality-DepS association previously reported.

Conclusions: Our study showed that long term exposure to high UPF intakes increased odds of subsequent recurrent DepS. This association was independent of overall diet quality. Further research is needed to understand the underlying mechanisms between food processing and depression pathophysiology.

Disclosure: No significant relationships.

Keywords: depressive symptoms; Prospective study; Ultra-processed foods; diet

EPP0260

Impact of temperament on mental illness stigma among medical students.

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Introduction: Mental illness stigma is the most significant obstacle impeding the wellbeing of individuals with such conditions. Thus, research on determinants of mental illness stigma may be of crucial importance in avoiding these attitudes. Affective temperaments are thought to be present in up to 20% of the healthy general population. However, there are very few studies addressing the relationship between temperament and mental health-related stigma.

Objectives: Evaluate attitudes and behavioral responses of medical students towards individuals with a mental illness. Explore factors associated with stigma including temperament.

Methods: A cross-sectional study was conducted among students in medical universities.

All participants were invited to complete a brief anonymous electronic survey administered on the google forms online platform. Data were collected using self-administered questionnaires, Stigma Measurement, Mental Illness: Clinicians' Attitudes (MICA). Students were also asked to complete the TEMPS-A Scale.

Results: The sample consisted of 1028 respondents (9.3% of the total population). Females represented 78,3% of the study sample. A dominant affective temperament was found in 17% of the cases under study, represented mainly by depressive and irritable temperaments. Bivariate correlations performed to assess the association between temperament and mental illness stigma revealed that

a positive relationship was identified between the MICA scale and hyperthymic temperament($p=0,04$). There were no significant associations between the other type of temperaments and The MICA scale.

Conclusions: Students' temperament should be considered in developing anti-stigma programs in undergraduate education. Further researches should be undertaken to disentangle the complex relationship among demographic features, personality traits, and attitudes toward people with a mental illness.

Disclosure: No significant relationships.

Keywords: stigma; medical student; temperament

Neuroimaging 01 / Oncology and Psychiatry 02

EPP0261

i-ECO: a novel method for the analysis and visualization of fMRI results in Psychiatry

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Introduction: The high technical barrier to entry in the field of neuroimaging can hinder early insight from promising results and the development of evidence-based clinical practice.

Objectives: The working group focused on published literature in order to develop a new methodology in the analysis, visualization, and representation of fMRI data in the psychiatric setting.

Methods: Three valid and established measures were chosen, in order to achieve dimensionality reduction, stability and explainability of results, namely Regional-Homogeneity; fractional Amplitude of Low-Frequency Fluctuations; Eigenvector-Centrality. Each measure was color coded and individual images per subject compiled, averaging results by functional networks as described the FIND lab of the University of Stanford. 272 individual scans were processed (130 neurotypicals, 50 patients with Schizophrenia, 49 with Bipolar Disorder, 43 with ADHD).

Results: The discriminative power between clinical groups of the novel method was significant both by human eye, and later confirmation by statistical tests, and by computer vision algorithms (Convolutional Neural Networks). The precision-recall Area Under the Curve, dividing by 80/20 proportion between train and test sets, was >84.5% for each group. The group of patients with Bipolar Disorder showed a partial overlap with the group of patients suffering from Schizophrenia – by a dominance of Eigenvector-Centrality and Regional-Homogeneity, as well as a lower prevalence of fractional Amplitude of Low-Frequency Fluctuations, for both in comparison to controls.

Conclusions: The present study offers preliminary evidence for the adoption of i-ECO (integrated-Explainability through Color Coding) in fMRI analyses during rest in the Psychiatric field.

Disclosure: No significant relationships.

Keywords: ReHo; Eigenvector Centrality; fMRI; fALFF

EPP0262

The effect of antidepressant treatment on white matter integrity in Major Depression

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Introduction: White matter abnormalities have been identified in major depressive disorder (MDD). Although several diffusion tensor imaging studies found decreased fractional anisotropy (FA) in MDD, the effect of antidepressants (AD) treatment on white matter integrity has been insufficiently studied.

Objectives: We sought to examine the effect of AD treatment of MDD on white matter, using DTI, in responders compared to nonresponders.

Methods: We included 25 individuals with MDD (HAMD ≥ 20) without inflammatory, unstable medical/neurological conditions or prolonged duration (> 1 year), or AD or anti-inflammatory treatment ≥ 1 week preceding first evaluation. Evaluation before treatment and at 16 weeks included depression rating scales, a cognitive battery, inflammatory markers and MRI. Desvenlafaxine was initiated at 50mg with a possible increase to 100mg at 8 weeks.

Results: Changes included: increased volume in responders in the right Inferior Fronto-Occipital fasciculus ($p=0.0315$) and Superior Longitudinal Fasciculus part 3 ($p=0.0050$); in remitters in the right Inferior Fronto-Occipital fasciculus ($p=0.0359$) and Superior Longitudinal Fasciculus part 2 ($p<0.05$) and 3 ($p=0.0481$); decreased volume in responders in the left Superior Longitudinal Fasciculus part 1 ($p=0.0147$) and left Corona Radiata ($p<0.05$); and in remitters in the left Superior Longitudinal Fasciculus part 1 ($p=0.0109$) and the Corpus Callosum part 5 ($p<0.05$); decreased FA in the right Cortico Spinal Tract in remitters ($p=0.0175$) and responders ($p=0.0272$), and an increase in FA in the left Uncinate Fasciculus in nonremitters ($p=0.0493$). These results lose significance following Bonferroni correction.

Conclusions: Overall, AD treatment of MDD was not associated with significant changes in FA, whole brain, or specific tract volume in this study.

Disclosure: This research was funded by Pfizer Canada.

Keywords: Neuroimaging; Depression; antidepressant; DTI

EPP0263

CLINICAL CASE “I finally woke up, it seems like a miracle”

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Introduction: Clinical case about a 62 year old patient, diagnosed with mixed anxiety-depressive disorder. In current treatment with Paroxetine, Clorazepate and Trazodone. She presents low spirits secondary to a neurological process (stroke + amyloid angiopathy+ epilepsy+ cognitive impairment) and difficulties in performing daily activities. Her daughter reports that she is totally dependent, she spends the whole day in bed. On examination we observe a dull mood, without emotional reactivity. Lack of motivation. Psychomotor slowness. Significant cognitive impairment with difficulties in performing daily activities. Mnesic faults.

Objectives: Clinical case shows radiological and cognitive improvement with vortioxetine

Methods: Last diagnoses: August 2020: HSA OF THE FRONTAL AND PARIETAL GROOVES RIGHTS September 2020: SYMPTOMATIC FOCAL EPILEPSY SECONDARY TO LEFT FRONTAL-PARIETAL INTRAPARENCHIMATOUS HEMATOMA December 2020: MYELOID ANGIOPATHIA February 2021: SUBARACHNOID HEMORRHAGE March 2021: DEPRESSIVE DISORDER SECONDARY TO MEDICAL ILLNESS - MODERATE COGNITIVE IMPAIRMENT

Results: Spectacular improvement in mood and cognitive deficit. The family reports that after 5 days they noticed the change. They find her more lively, she has returned to doing housework and is autonomous for day-to-day life. She has regained her memory and performed calculation exercises on a daily. The patient says that she has returned to being her usual self, “before I felt like a mummy and now I have finally woken up, it seems like a miracle”.

Conclusions: It has improved much with change of antidepressant, from paroxetine to vortioxetine in patient who show in cranial MRI: New-onset lesion in the right frontal lobe attributable and subarachnoid hemorrhage located in convex furrows, radiological findings in favor of amyloid angiopathy

Disclosure: No significant relationships.

Keywords: MYELOID ANGIOPATHIA; SUBARACHNOID HEMORRHAGE; DEPRESSIVE DISORDER SECONDARY; MODERATE COGNITIVE IMPAIRMENT

EPP0264

Resting-state EEG networks characterized by intramodular and global hyperconnectivity in depressive sample

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Introduction: Depression is characterized by a pattern of specific changes in the network organization of brain functioning.

Objectives: We researched a graph structure specificity in a depressive student sample by analyzing resting-state EEG. All possible combinations of graph metrics, frequency bands, and sensors/sources levels of networks were examined.