

of suicidal thoughts, were independent of socio-demographic factors. Two-tailed Student's t-test, Mann-Whitney's U test, Pearson's chi-squared test were applied to compare socio-demographic, clinical characteristics and CANTAB tests scores of patients without and with suicidal thoughts (based on the MADRS-SIGMA 10<sup>th</sup> Item).

**Results:** Overall, the sample had moderate to severe depression (MADRS-SIGMA mean score [SD] - 30.8 [8.6]). Suicidal thoughts were reported by 21 (70 %) patients. The CGT total deliberation time was significantly shorter in patients with suicidal thoughts in comparison to patients without suicidal thoughts (mean time [SD]: 1644 [397] ms vs. 2291 [416] ms;  $p = 0.001$ , consecutively). Among all the CANTAB tests, only the CGT total deliberation time showed a significant negative correlation with higher severity of suicidal thoughts ( $r = -0.551$ ;  $p = 0.002$ ). This association remained significant in multivariable analysis including gender, age and education added to the model of CGT deliberation time and suicidal thoughts ( $\beta = -0.409$ ;  $p = 0.046$ ).

**Conclusions:** Cognitive indicators, particularly those related to impulsive decision making, may be targeted in the identification of suicidal ideations in individuals with MDD. Our findings imply that testing for neurocognitive biomarkers of suicide risk may supplement clinical assessment in patients with MDD. Interventions aimed at cognitive impairment may be incorporated into strategies for the prevention of suicidal behavior.

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#### P.2024

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#### SELECTIVE SEROTONIN REUPTAKE INHIBITORS (SSRIS) MAY IMPROVE BEHAVIORAL INHIBITION IN PATIENTS WITH OBSESSIVE COMPULSIVE DISORDER: A FEASIBILITY STUDY

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**Introduction:** The OTO study (Optimal Treatment for Obsessive Compulsive Disorder)1 was a feasibility study which compared three groups for the treatment of OCD: Sertraline monotherapy, CBT monotherapy and combination-treatment (Sertraline + CBT). Whilst the primary endpoint was focused on symptomatology using the Y-BOCS scale, there were additional secondary endpoints which included data obtained from a battery of computerised neurocognitive tasks (CANTAB)2. This paper analyses the data from the Intra/Extra Dimensional (ID/ED) Set Shifting Task (ID/ED Task), which assesses cognitive inflexibility, and the Stop Signal Task (SST), which assesses motor impulsivity. This study is the first to apply these tests across different treatment groups of OCD patients, with the aim of exploring relationships between cognitive functioning and to improve personalized forms of treatment.

**Method:** This was a three arm, multi centre, randomised feasibility study. The treatment arms were SSRI monotherapy (Sertraline), CBT monotherapy and combination therapy (SSRI and CBT). We used a paired samples T-test to compare the baseline scores and the post stimulation scores at week 16 on the CANTAB tasks for each treatment group.

**Results:** We had complete neurocognitive data (baseline and post stimulation)

for 23 patients (N=45 participants at baseline). The level of drop out was high and similar across all three treatment groups. On the Stop Signal Reaction Time - (SSRT) Task, the most significant item of the SST, an analysis using Last Observation Carried Forward (LOCF) approach found a significant effect for sertraline ( $d=1.00$ ,  $p=0.036$ ), and no significant improvements for the combination treatment group ( $d=0.07$ ,  $p=0.906$ ) or for the CBT monotherapy group ( $d=-0.29$ ,  $p=0.554$ ). No significant effect was found for ID/ED task in any of the three groups. An analysis on the completers only showed that in the SSRI monotherapy group there was a statistically significant effect on the SSRT ( $d=1.36$ ,  $p=0.021$ ), while no significant effect was found in the other two groups on SSRT. In the ID/ED task, again, no significant improvement was shown in any of the three groups in the analysis on completers.

**Conclusions:** The significant finding from our analysis is the improvement in motor impulsivity (as measured by the Stop Signal Reaction Time) in the Sertraline monotherapy group. A reduction in motor disinhibition measured on the Stop Signal Task differentiated the response to SSRI, from that to CBT or CBT+SSR, hinting SSRI may be optimal for OCD with this cognitive profile - possibly patients with OCD and comorbid Attention deficit hyperactivity disorder (ADHD). The analyses for the ID-ED highlight that cognitive flexibility was not significantly altered by any of the treatment groups in this study, suggesting this neurocognitive function is difficult to improve with current treatment modalities. However, our analysis demonstrates that there is scope for improving motor impulsivity in patients with OCD who are treated with SSRIs.

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#### P.2025

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#### TRANSCRANIAL DIRECT CURRENT STIMULATION IN OBSESSIVE COMPULSIVE SYMPTOMS: A PERSONALISED APPROACH

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**Background:** Transcranial-direct-current-stimulation (tDCS) is a non-invasive form of neurostimulation with potential for development as a self-administered intervention. It has been shown to be promising as a safe and effective treatment for obsessive compulsive disorder (OCD) in a recently published paper1. Our aim is to investigate if specific neurocognitive markers of inhibition and flexibility, implicated in the mechanism of effect of tDCS, represent viable predictive biomarkers for personalising the choice of stimulation target and thereby optimising clinical outcomes.

**Methods:** FEATSOCS was a randomised, double-blind, sham-controlled, crossover, multicentre study. Twenty adults with DSM-5-defined OCD took part: each received three courses of clinic-based tDCS (SMA-supplementary motor area, L-OFC-left orbitofrontal cortex and Sham), randomly allocated and delivered in counterbalanced order. Each course comprised four 20-minute 2 mA stimulations, delivered over two consecutive days, separated by a 'washout' period of at least four weeks. Patient representatives with lived experience of OCD were actively involved at all stages. In this project, we focused on the neurocognitive data collected via the CANTAB-Battery2 and in particular on motor-impulsivity (stop signal reaction time - SSRT) and cognitive inflexibility (stage-8 and stage-9 of the Intra/Extra-Dimensional-Set-Shifting-Task – assessing extra dimensional set shifting and reversal learning). Neurocognitive assessments were conducted before and after stimulation. We used a paired samples T-test to compare the baseline scores and the post-stimulation scores on the CANTAB tasks for each

treatment group.

**Results:** By stimulating the OFC, we obtained a reduction in cognitive inflexibility on stage-8 and stage-9 of the Intra/Extra-Dimensional-Set-Shifting-Task (effect sizes of  $d=0.24$  and  $d=0.18$ , respectively), but we see a worsening of motor impulsivity (stop signal reaction time - SSRT) with a negative effect size of  $d=-0.25$ . By stimulating the SMA, on the other hand, we see a less clear effect on cognitive inflexibility (effect size of  $d=0.16$  on stage 8 and  $d=-0.22$  on stage 9), but a numerically significant improvement in motor impulsivity (SSRT - effect size of  $d=0.37$ ). These results are not statistically significant, but considering the sample of this feasibility study, these numerically significant figures are important signals of effect. Stimulating with Sham did not have numerically significant and clear signals of effect on any of these neurocognitive tasks.

**Conclusions,** These preliminary results could lead to the use of the latent phenotypes of cognitive inflexibility and motor impulsivity as markers to drive and deliver tDCS in a personalised approach. Cognitive inflexibility has been shown to be a challenge in clinical practice and currently there are no effective treatment for this transdiagnostic latent phenotype. tDCS could constitute an effective and feasible option to treat cognitive inflexibility and the OFC could be targeted if aiming at improving this endophenotype. For example, the OFC could be the target in patients with OCD and OCPD/ASD comorbidity. On the other hand, motor impulsivity is a frequent endophenotype that we find in patients with OCD and SMA could be stimulated to reduce impulsivity (e.g., patients with OCD and ADHD). These results should be corroborated by a larger trial, possibly adopting a home-based approach.

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##### DEPRESSION AMONG PHYSICIANS IN A GOVERNMENT DESIGNATED COVID-CENTER HOSPITAL DURING CORONAVIRUS DISEASE 19 PANDEMIC

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**OBJECTIVES:** This study aimed to determine the prevalence, most common symptoms and sociodemographic factors associated with depression among physicians in a government COVID-Center i.e. Southern Philippines Medical Center-Institute of Psychiatry & Behavioral Medicine in Bajada, Davao City.

**METHODOLOGY:** This cross-sectional, survey-based study collected socio-demographic data and PHQ-9 scores using Google Forms, from resident physicians from July 1 to August 31, 2020. Multinomial logistics regression analysis was used to identify risk factors of depression.

**RESULTS:** Two hundred fifty-one (251) out of 376 physicians responded (66.75% response rate). The average age was 30 years old, majority were female (58.57%, 147), single (78.88%, 198), frontliners (77.29%, 194), with average hospital experience of 2.0 years. Ninety six (38.26%) were assigned in surgical

departments while 155 (61.75%) worked in nonsurgical departments. There were twelve respondents (4.78%) who had a history of psychiatric illness and 31 (12.35%) had previous psychiatric intervention, while 66 (26.29%) had a history of medical illness. Eighty-five (33.86%) had depression using PHQ-9; 57 (22.71%) as mild, 19 (7.57%) moderate, 7 (2.79%) moderately severe and 2 (0.8%) severe. Out of 85 residents who were depressed, the most common symptoms were: low energy (81, 95.29%); anhedonia (76, 89.41%); and feeling depressed (72, 84.70%). Medical illness was associated with higher levels of depression. Physicians with a history of psychiatric illness, psychiatric intervention and medical illness had significantly higher levels of depression.

**CONCLUSION:** More than a third (33.86%) of physicians screened positive for depression. Current mental health programs must be strengthened and made specific, to prevent and address depression especially among those who have a history of psychiatric and medical illness.

**LIMITATIONS AND RECOMMENDATIONS:** Only resident physicians in one tertiary hospital were the respondents of the study and therefore this study cannot make generalizations to other resident physicians from other hospitals. Data was gathered during the early phase of the outbreak and lacked longitudinal follow up. The cross-sectional nature of the study did not allow for determination of temporality. This study was unable to distinguish if the symptoms of depression were associated with being a physician or with living in a city with a viral outbreak since there was no comparator group. This study was unable to differentiate if the depressive symptoms were from a pre-existing psychiatric illness or were new-onset symptoms. Although the study asked for participants' history of psychiatric intervention, the study did not specify which psychiatric interventions (pharmacologic or nonpharmacologic) the participants availed. Despite the response rate being 68%, response bias was still present if the non-responders were either not interested in the survey or too stressed to participate. Extending the sampling period may have provided ample time for participants to answer the online questionnaire. Although the absence of face-to-face interviews would have allowed respondents to feel more comfortable in reporting their symptoms, it also prevented the tracing and investigation of nonresponders and follow-up of staff members who needed help. Longitudinal studies on the same population may be conducted to investigate depressive symptoms during the different phases of the pandemic.

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