

( $p < 10^{-3}$ ), following a diet ( $p < 10^{-3}$ ), and consulting a nutritionist ( $p = 0.009$ ).

**Conclusions:** In our study, orthorexia seems to be quite widespread among medical students, particularly females, who are overweight or obese, and who use weight control methods.

**Disclosure of Interest:** None Declared

## EPP0224

### Efficacy of transcranial direct current stimulation for controlling of food craving in subjects with overweight or obesity

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**Introduction:** This study investigates the effects of transcranial direct current stimulation (tDCS) on food craving improvement and changes in brain function associated with craving in overweight and obese subjects.

**Objectives:** Food craving disregards the homeostatic mechanisms related to appetite and nullifies the rewarding effects of food, directly contributing to body weight and eventually leading to obesity. In this study, we aim to explore the effects of transcranial direct current stimulation (tDCS) on food craving improvement and changes in brain function associated with craving by conducting a total of 10 sessions of tDCS over a period of 2 weeks on overweight and obese subjects.

**Methods:** A total of 86 patients who were overweight or obese (BMI  $\geq 23$  kg/m<sup>2</sup>) during the study period were included. The tDCS montage involved placing the anode over the left and the cathode over the right DLPFC. Weight, BMI, neuropsychological variables, and food craving-related variables were assessed. We measured absolute and relative EEG power in 19 channels and analyzed QEEG according to the following frequency ranges: delta (1–4 Hz), theta (4–8 Hz), alpha (8–12 Hz), beta (12–25 Hz), high beta (25–30 Hz), and gamma (30–80 Hz).

**Results:** After the application of tDCS, there was no significant reduction observed in weight and BMI. However, all measures related to food and eating showed a decrease in the intensity of cravings, and there was also a significant reduction in depression, anxiety, and perceived stress. In quantitative EEG analysis, an increase in theta waves was observed in the left frontal area (F7 and F3), an increase in alpha waves in the right parietal area (P4), and a decrease in beta waves in the frontal area (FP2) and occipital area (O1).

**Conclusions:** This study investigated the effects of tDCS on food craving in overweight and obese individuals, and it was found that there were improvements in psychological factors such as depression and anxiety. Additionally, using quantitative EEG, neurophysiological changes were observed, including an increase in theta waves and a decrease in beta waves.

**Disclosure of Interest:** None Declared

## Epidemiology and Social Psychiatry

### EPP0225

#### The social determinants of depression: social support, loneliness, and the impact of the COVID-19 pandemic

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**Introduction:** The COVID-19 pandemic involved stringent social restrictions, a surge in mortality, and significant economic consequences, affecting age groups differently and leading to increases in loneliness and mental health problems, particularly depression, which was already very common before the pandemic.

**Objectives:** Analyse changes and related factors of the relationship between loneliness and depression by age group from (1) before to the COVID-19 outbreak, (2) during the pandemic, and (3) after the last state of emergency. Moreover, we aim to (4) evaluate the effect of social support to alleviate feelings of loneliness and improve the course of depression.

**Methods:** We used data from three different cohorts, all representative of the Spanish adult population. (1) We longitudinally analysed the association between loneliness and depression with a sample interviewed before ( $N = 1,880$ ) and during ( $N = 1,103$ ) the pandemic. We used mixed-models to study changes in major depressive disorder (MDD) by age group and regression models to quantify the association between age and potential mediating effects. (2) We analysed data of 2,000 adults during the pandemic. Several regression models were constructed to assess the impact of pre-pandemic mental disorders on the main association by age group. (3) Out of those 2,000 participants, 1,300 were interviewed 9 months later, to determine group-based loneliness trajectories and its associated risk factors. (4) We analysed the relationship between loneliness, social support, and MDD over a 7-year period ( $N=404$  individuals aged 50+ having MDD). We tested cross-lagged panel models using structural equation modelling.

**Results:** During the pandemic the probability of having MDD increased significantly among younger individuals, and was partly explained by loneliness, low resilience, and worsened economic situation. Loneliness was associated with more depressive symptoms, and this association was stronger in younger adults without pre-pandemic mental disorders and in older adults with them. At the end of pandemic, three courses of loneliness were detected: invariant low loneliness (42.6%), decreasing medium loneliness (51.5%), and fairly invariant high loneliness (5.9%). Risk factors for worse trajectories were being younger, female, not married, and, notably, having pre-pandemic mental disorders. Among individuals with depression prior to the pandemic, lower social support predicted higher subsequent levels of loneliness, resulting in an increase in MDD recurrence.

**Conclusions:** Strategies to decrease the impact of loneliness on depressive symptoms should consider individuals mental health background, address social determinants, and adopt an age-driven perspective.

**Disclosure of Interest:** None Declared