London, United Kingdom; [3]Escuela de Ingeniería de Antioquia, Ingeniería Biomédica, Medellin, Colombia and [4]Universidad CES, Facultad De Medicina, Medellin, Colombia
*Corresponding author.
doi: 10.1192/j.eurpsy.2022.1895

Introduction: The measurement of the physiological coherence, the order and the quality of the connection of complex systems such as the cardiac and the respiratory system, varies in situations of stress and relaxation.
Objectives: We aim to assess changes in physiological coherence and perception of stress during mental stress and directed breathing exercises.
Methods: Repeated-measures study in healthy adults without prior training in breathing techniques, aged between 18 and 65 years of both sexes who were evaluated in three situations: baseline, mental stress (Stroop test and successive subtractions), and directed breathing, during which were captured heart rate and respiratory signals to estimate physiological coherence and the participants rated the perceived stress at each moment.
Results: 34 participants were analyzed, 59% women, with a median age of 36 years (Rq = 13). During mental stress tasks, the median for physiological coherence was similar to baseline coherence but increased significantly with five minutes of directed breathing exercises (38% vs. 63% p <0.0001). The highest perception of stress was during successive subtractions (Me 7, Rq = 4) and the lowest during directed breathing exercises (Me 2 Rq = 3.0). The correlation was sought between physiological coherence and perception of stress during each of the four moments of the study. Basal (Rho Spearman -0.05, p 0.54); Stroop (Rho -0.17, p 0.03); successive subtractions (Rho 0.50, p 0.77); and directed breathing (Rho -0.28, p 0.09).
Conclusions: A correlation was found between physiological coherence and perception of stress during the Stroop test; however, no association was found.

Disclosure: No significant relationships.
Keywords: Emotional stress; Physiological; Breathing exercises; Heart rate

EPV1217

Non-invasive vagus nerve stimulation attenuates the burnout

S. Tukaiev[1]*, O. Pravda[1], N. Vysokov[2], A. Tarasenko[2], D. Toleukhanov[2], V. Komarenko[3], S. Danylov[3] and V. Kravchenko[1]
[1]National Taras Shevchenko University of Kyiv, Institute Of Biology And Medicine, Kyiv, Ukraine; [2]BrainPatch Ltd, Brainpatch Ltd, London, United Kingdom and [3]Beehiveor Academy and R&D Labs, Beehiveor Academy And R&d Labs, Kyiv, Ukraine
*Corresponding author.
doi: 10.1192/j.eurpsy.2022.1896

Introduction: Vagus nerve stimulation produces therapeutic effects for the treatment of psychiatric disorders, heart failure, and others.
Objectives: The aim of the current study was to evaluate the effects of the non-invasive vagus nerve stimulation on emotional burnout.
Methods: 6 right-handed male volunteers aged 18-22 years participated in study. We used the combination of pleasant meditative classical music and a slow bi-polar wave (0.1-0.2 Hz) of electrical non-invasive transcutaneous auricular vagus nerve stimulation for 5 minutes. The set of 4 VNS was performed at intervals of 3 days. EEG was registered during the rest state (3 min, closed eyes condition). To measure the severity of emotional burnout in students, we used the 22-item Maslach Burnout Inventory (MBI).
Results: VNS significantly improve the depersonalization and reduction of personal achievements (components of the emotional burnout). Changes in the psychoemotional state of the respondents were accompanied by the increase in the theta-Fz/alpha-Pz ratio, that reflects an enhancement of the activation level. A set of non-invasive stimulation of the auricular branch of the vagus nerve leads to an increase in the level of activation (the ratio of beta / alpha rhythms). The changes in the power of the alpha rhythm may relate to improving of mental process, creativity, creative thinking. An increase in alpha rhythm may reflect internally oriented attention in creative activities.
Conclusions: The preliminary data suggests that the novel mastoid stimulation device may have a prolonged stimulating effect on the brain processes while attenuating the burnout at the same time.

Disclosure: No significant relationships.
Keywords: EEG; burnout; neuromodulation; vagus nerve stimulation

EPV1218

Estradiol and Progesterone as key modulators of central systems implicated in schizophrenia.

A. Ruiz-Tristan[1,2]*, C. Rivera-Clemente[1], V. Gomez-De-Las-Heras[1,2], S. Ávila[3] and J. Molina[1,4,5]
[1]Hospital 12 de Octubre, Villaverde Mental Health Center, Madrid, Spain; [2]Hospital 12 de Octubre, Psychiatry, Madrid, Spain; [3]Complutense University of Madrid, Psychiatry, Madrid, Spain; [4]Hospital 12 de Octubre, Center For Biological Research In Mental Health (cibersam), Madrid, Spain and [5]Hospital 12 de Octubre, Clinical Management Area Of Psychiatry And Mental Health, Madrid, Spain
*Corresponding author.
doi: 10.1192/j.eurpsy.2022.1897

Introduction: It has been suggested that dysregulation of sex hormones is associated with schizophrenia. However, obesity and metabolic syndrome are very common between schizophrenic patients, and it can also dysregulate sex hormones so they could act as confounders.
Objectives: To determine if estradiol and progesterone are abnormally elevated regardless of obesity or metabolic syndrome in men with SCZ.
Methods: We measured serum levels of progesterone and estradiol in 56 schizophrenic male patients at treatment with a depot antipsychotic. Subsequently, we studied the association or independence of our results with obesity or metabolic syndrome by a Chi Square Test.
Results: 66.07% of our patients elevated progesterone levels, 19.64% of our patients elevated estradiol levels, and 16.07% of our patients elevated both, progesterone and estradiol, simultaneously. We found no relationship between increased estradiol and / or progesterone with obesity and / or metabolic syndrome.
Conclusions: Estradiol and progesterone are abnormally elevated regardless of obesity and / or metabolic syndrome in male schizophrenic patients on depot treatment.

Disclosure: No significant relationships.
Keywords: schizophrénia; progesterone; estradiol; endocrinology

https://doi.org/10.1192/j.eurpsy.2022.1896 Published online by Cambridge University Press