EPP0698

Short-term memory depends on the level of emotional burnout

S. Tukaiev[1,2*], I. Zyma[1] and M. Makarchuk[1]

[1]Institute of Biology and Medicine, Taras Shevchenko National University of Kyiv, Kyiv, Ukraine and [2]Faculty of Communication, Culture, and Society, Institute of Public Health, Università della Svizzera italiana, Lugano, Switzerland
*Corresponding author.
doi: 10.1192/j.eurpsy.2024.780

Introduction: Emotional burnout refers to a syndrome caused by chronic stress. The formation of emotional burnout may lead to persistent changes in cognitive activity and particularly in memory and attention.
Objectives: As the power of human EEG-spectrum components varies significantly under cognitive testing, the aim of our study was to investigate the dynamics of changes of EEG parameters under a memory task depending on the severity of burnout.
Methods: 42 healthy volunteers (students aged 18 to 24 years) participated in this study. EEG was registered over a period of 3 minutes during the rest state and 10 minutes during a verbal memory task. The spectral power density (SPD) of all frequencies from 0.2 to 35 Hz was estimated. The Mann-Witney criterion was carried out for the comparison of the independent data samples. The correlations were estimated using the Spearmen's coefficient correlation. In order to determine the stages of burnout we used the test "Syndrome of emotional burnout" (by Boyko), adapted for students.
Results: We observed variations in parameters of EEG during memorizing and retention phases depending on the intensity of the burnout. The intensity of the Exhaustion stage varied inversely with SPD in alpha3 (parietal and temporal regions), beta1 (parietal regions) and beta2 (parietal, right occipital and temporal regions) during the memorizing phase. The formation of the Exhaustion stage of burnout was accompanied by a decrease in alpha3 (parietal, left occipital and right temporal regions), beta1 (parietal, occipital and left temporal regions) and beta2 (parietal regions) during the retention phase.
Conclusions: Our data indicate that short-term memory depends on the emotional state of subjects.

Disclosure of Interest: None Declared

EPP0700

Influence of Ovocystatin on Aβ42 soluble oligomeric and fibril formation in in vitro studies

B. Stańczykiewicz[1*], M. Piksa[2], T. Goszczyński[3], K. Gołąb[4], B. Konopska[4] and A. Zabłocka[2]

[1]Department of Psychiatry, Wroclaw Medical University; [2]Department of Microbiology; [3]Department of Experimental Oncology, Hirszfeld Institute of Immunology and Experimental Therapy, Polish Academy of Sciences and [4]Department of Pharmaceutical Biochemistry, Wroclaw Medical University, Wroclaw, Poland
*Corresponding author.
doi: 10.1192/j.eurpsy.2024.781

Introduction: Alzheimer's disease is characterized by the presence of β-amyloid deposits in senile plaques and brain vessels. β-amyloid stimulates the glial release of proinflammatory cytokines, reactive oxygen species (ROS), or nitric oxide (NO), which are potentially toxic to neurons. One potential therapy for Alzheimer's disease is the use of agents that inhibit the aggregation and formation of insoluble β-amyloid deposits in the brain, or break down the aggregates that have already formed, thus preventing their toxicity.
Objectives: This study aimed to evaluate the effect of ovocystatin on the formation and destabilization of β-amyloid aggregation.
Methods: The effect of ovocystatin on β-amyloid aggregation was determined by Thioflavin T (ThT) Assay and Transmission Electron Microscopy (TEM). The impact on PC12 cell viability was determined by MTT assay.
Results: Ovocystatin can interact directly with $A\beta_{42}$, inhibiting its aggregation and reducing the toxicity induced by aggregated forms of β-amyloid. All effects are dose-dependent. Additionally, a significant increase in the PC12 cell viability treated simultaneously with $A\beta_{42}$ and ovocystatin was observed.
Conclusions: Ovocystatin may be an important factor in the prevention and treatment of Alzheimer's disease by regulating the conversion of monomeric β-amyloid into larger and potentially more toxic particles. However, the mechanisms of inhibition of amyloid fibrillar protein formation and/or destabilization by ovocystatin are still unclear and require further investigation.

Disclosure of Interest: None Declared

Others

EPP0701

Temperamental and Neurocognitive predictors in Korean basketball league draft selection

B. W. Nam[1*], D. H. Han[2], S. M. Kim[2], J. Hong[2], H. Hwang[2] and K. J. Min[2]

[1]Dr. Nam's Psychiatric Clinic, Choongju and [2]Chung Ang University Hosptial, Seoul, Korea, Republic Of
*Corresponding author.
doi: 10.1192/j.eurpsy.2024.782

Introduction: The Korean Basketball League(KBL) holds an annual draft to allow teams to select new players, mostly graduates from the elite college basketball teams even though some are from high school teams. In sports games, many factors might influence the success of an athlete. In addition to possessing excellent physical and technical factors, success in a sports game is also influenced by remarkable psychological factors. Several studies reported that elite sports players can control their anxiety during competition, which may lead to better performance. In particular, the temperament and characteristics of players have been regarded as crucial determinants of the player's performance and goal. In this regard, numerous studies suggest that personality is considered to be an important predictor of long-term success in professional sports
Objectives: Based on previous reports and studies, we hypothesized that physical status, temperament and characteristics, and neurocognitive functions of basketball players could predict the result of KBL draft selection. Especially, temperament and characteristics

were associated with the result of KBL selection. The basketball performances including average scores and average rebound were associated with emotional perception and mental rotation.
Methods: We recruited the number of 44 college elite basketball players(KBL selection, n=17; Non-KBL selection, n=27), and the number of 35 age-matched healthy comparison subjects who major in sports education in college. All participants were assessed with the Temperament and Character Inventory(TCI), Sports Anxiety Scales(SAS), Beck Depression Inventory(BDI), Perceived Stress Scale (PSS-10), Trail Making Test(TMT), and Computerized Neuro-cognitive Test(CNT) for Emotional Perception and Mental Rotation.
Results: Current results showed that physical status, temperament and characteristics, and Neurocognitive functions of college basketball players could predict the KBL draft selection. Among temperament and characteristics, novelty seeking and reward dependence were associated with KBL draft selection. The basketball performances including average scores and average rebound were associated with emotional perception and mental rotation.
Conclusions: In order to be a good basketball player for a long time, it was confirmed that temperamental factors and Neurocognitive factors were very closely related. Furthermore, it is also judged that these results can be used as basic data to predict potential professional basketball players.

Disclosure of Interest: None Declared

EPP0702

The impact of Extremely Low Frequency Electro-Magnetic Fields on Depression Anxiety and Stress

I. Kacem[1]*, I. Jammeli[1], A. Ghenim[1], A. Aloui[1], A. Chouchane[1], M. Bouhoula[1], A. Brahem[1], H. Kalboussi[1], O. El Maalel[1], S. Chatti[1], A. Kekeni[2], K. Bouzabia[2], M. Maoua[1] and N. Mrizak[1]

[1]Occupational Medicine Department, Farhat Hached Academic hospital and [2]Medical Department, Electricity and Gas Company, Sousse, Tunisia
*Corresponding author.
doi: 10.1192/j.eurpsy.2024.783

Introduction: According to World Health Organisation (WHO), Extremely Low Frequency Electro-Magnetic Fields (ELF-EMF) include frequencies ranging from 0 to 300 Hz. They are widespread in our daily life and in the workplace. These fields have an impact on physical and mental health including depression and anxiety.
Objectives: To assess the impact of chronic occupational exposure to ELF-EMF on Depression, Anxiety and Stress among workers in the Tunisian Electricity and GasCompany of Sousse, Tunisia.
Methods: In this cross-sectionalstudy, participants were enrolled into two groups: an “exposed group” including workers in a power plant and an “unexposed group” including administrative workers belonging to the same company. The Exposure to ELF EMFs was assessed by spot measurements using a portable magnetometer. Depression,Anxiety and Stress were assessed by the the Depression,Anxiety and Stress Scale(DASS-21).
Results: This study included 77 exposed subjects and 88 unexposed subjects. The median age was 37 years for the exposed group and 43,5 years for the unexposed ones. Almost half of the exposed group were technicians and had a work experience of 9 years. The median value of EMF was 5,86 uT in the power plant[Min 0,1 Max 40,34 ut]. The interpretation of DASS-21 showed that 24.7% of the exposed group and 3.4% of the unexposed group had depression (p<10-3). Anxiety was reported by, 23.4% of the exposed group and by none of the unexposed group. Stress was observed among 46.8% of the exposed group and by none of the unexposed group. After multivariate analysis, ELF-EMF exposure was significantly associated only with depression ($p<10^{-3}$; OR=1,45 [1,17-1,81])).
Conclusions: Chronic occupational exposure to ELF-EMF increases the risk ofDepression, anxiety and Stress. Underlying mechanisms are not established yet suggesting the need of further studies.

Disclosure of Interest: None Declared

EPP0703

Who moderate the relationship between executive functions and quality of life among adults with and without adhd: structural equation model

N. Grinblat[1]* and S. Rosenblum[1]

[1]Department of Occupational Therapy, Faculty of Social Welfare & Health Sciences, University of Haifa, Haifa, Israel
*Corresponding author.
doi: 10.1192/j.eurpsy.2024.784

Introduction: Literature evidences indicates that adults with attention-deficit/hyperactivity disorder (ADHD) are struggling with executive functions deficiencies, organization in time deficits, low sleep quality, and poor quality of life (QoL). However, it is not clear how those factors associate and interact with each other.
Objectives: This study aims to compare those factors as well as the relationships between them, among adults with and without ADHD using structural equations modeling (SEM).
Methods: Sixty-nine adults with ADHD and 52 matched controls (ages 20-46) completed the Behavior Rating Inventory of Executive Function-adult version (for executive functions), Time Organisation and Participation Scale (for organization-in-time), Mini Sleep Questionnaire (for sleep quality), and Adult ADHD Quality of Life questionnaire (for QoL).
Results: Compared to adults without ADHD, adults with ADHD showed significantly poorer executive functions, organization-in-time, sleep quality and QoL. The SEM indicated that sleep quality and organization-in-time domains mediated the relationship between executive functions abilities and QoL. This SEM explained 79% of the QoL variance for adults with and without ADHD.
Conclusions: Understanding the role of organization-in-time and sleep quality as mediators between executive functions and quality of life emphasize the unique challenges of adults with ADHD, which deals with deficiencies at those factors. Those findings call for including these factors in evaluation and intervention processes to improve QoL and this population’s global health.

Disclosure of Interest: None Declared