EPP1073

Visuomotor reaction time can predict IQ in children

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Introduction: It is well established that reaction time and IQ test scores are correlated, although the strength of this relationship is a matter of debate (Neisser et al., 1996). It was proposed that processing speed is a component of intelligence (Deary, Penke, & Johnson, 2010; Hunt, 2011). In our previous research we have not revealed the relationship between IQ and reaction time in children (Kiselev et al., 2000). However, it is possible that reaction time can predict intelligence test scores in the developmental perspective.
Objectives: This study investigated whether visuomotor reaction time in 5 year-old children predicts intelligence test scores in 8 year-old children using the longitudinal approach.
Methods: The participants were 35 children (17 males and 18 females) at the age of 5 years (5,34±0,45). We used computerized sensorimotor technique (Kiselev et al., 2009) to investigate visuomotor reaction time in children. Children completed simple, discrimination and choice reaction time tasks. The IQ of 8-year children was assessed by the WISC.
Results: The regression analysis has revealed the significant ($p \leq 0,05$) relationships between discrimination and choice reaction time tasks in 5 years-old children and non-verbal IQ performance in these children at 8 years of age. However, we did not find this relationship for simple reaction time task.
Conclusions: In view of obtained results it can be assumed that visuomotor reaction time in preschool children can predict non-verbal intelligence test scores in the developmental perspective. The received data can give new perspective in the understanding the interrelation between reaction time and IQ in children.

Keywords: processing speed; intelligence; visuomotor reaction time

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On psychiatry and psychology

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Introduction: Psychiatry is fundamental interdisciplinary medical science with essential importance for enormous health-problems of humanity. Creation of integrative-psychiary in context of multidimensional&holistic medicine, founded by HIPPOCRATES-GALENUS-HUA T'UA-AVICENA-PARACELSUS is necessary to counteract disastrous human health-situation. Psychiatry needs new integrative therapy-models considering application of psychopharmacotherapy as well as practices of psycho-somatic (Th. v.UEXKÜLL) and somato-psychic theories (Y.IKEMI). Emperor AKIHITO during Opening-Ceremony of ICPM-2005-Kobe appointed to consider "total symptoms of mind-body, seeking ways of holistic care".
Objectives: REFERENCES. PSYCHIATRY: EPA-2020-virtual/Madrid, Eur.Psychiatry 63S, EPP0834/5+EPV0581/1470; EPA-2019-Warsaw, Eur. Psychiatry 56S,S689; EPA-2018-Nice, Eur.Psychiatry 48/S1, S623&567&662. WPA-2019-Lisbon, E-Poster WCP19-2137, -1822, -1839; 2018-Mexico-City, Abs.-Book WCP18-0584/-0625/-0643/-0654. 2011-Buenos-Aires,AB:PO1.200. PSYCHOLOGY: EFPA-2019-Moscow, Abs.-Book 1529,1530,1549. IUPsyS-2012-Cape-Town, IntJPsychol 47:407; -2008-Berlin, 43/3-4:154, 248,615,799; -2004-Beijing, AB:49,587. PSYCHOSOMATICS: ICPM-2017-Beijing, AB:ID: 648493,648895,648749,648878; -2005-Kobe, J.Psychosom.Res. 58:85-86.
Methods: Evaluation of psychic-"polar-attitude-list"/physiological-parameters: heart-rate, blood-pressure,etc. from patients/probands after training by occidental/oriental practices (Music-/Yogatherapy/others) (ref.).
Results: Observations demonstrate strong positive influence after music[1], respiratory[2], hatha-yoga[3] therapies. Items of psycho-physiological (relaxed), emotional (tranquil/happy), cognitive (few/-ordered thoughts), voluntary (active/spontaneous), social (open/assertive), consciousness (clear/sleepy) categories are significantly positive changed 25-50%. The 3-therapies have specific psychic-effects,e.g. items "relaxed/tranquil" after respiratory- (+45/50%) and music- (+20/5%), also item "open" after music-therapy (+25%) are positive, but negative after respiratory-therapy (-20%). Psychic-effects are correlated with positive physiological-ones,e.g. heart/respiratory-frequency decreased 25-30%, voluntary-apnoea prolonged 55%. Mountain-altitude (>2000-3000m), hypothermia (<20 to 0°C) influenced positively psychic/physiological-parameters,e.g. heart-rate/blood-pressure decrease (n=125,P<0.05-0.01).
Conclusions: Different methods of integrative psychiatric therapy are with preference,e.g. for depression is suitable respiratory/physical-training, also hypothermia&high-mountain therapy (activation-euphoria), for mania:music-therapy (inhibitory-effect). Systematically research about single/combined therapies is necessary,e.g. for epilepsy: Respiratory-therapy/hypothermia,etc. could help patients (hypo-/hypercapnia: inhibitory/excitatory effects on CNS-structures).

Keywords: cyclophrenia; integrative psychiatry; psychophysiology; Epilepsy

EPP1073

Working memory after and during 6 Hz transcranial alternating current stimulation

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Introduction: Transcranial alternating current stimulation (tACS) is a non-invasive brain stimulation technique allowing to induce changes in oscillatory activity. Theta activity has been reported to play a major role in maintenance of information in working memory (WM).

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Objectives: The current study had the initial goal to check the effect of theta tACS on accuracy and resting state EEG in a set of match-to-sample WM tasks.
Methods: In the first experiment, we tested 31 participants in the WM task after 20-min tACS applied at Fpz and CPz at 6 Hz, 1 mA.). In the second experiment, we compared the after-effects and online effects of the stimulation in a sample of 25 individuals. Five similar 25-min blocks filled with the same working memory task were distributed over 3 days. We assessed the same group of participants in all three sessions. On the Training day, the participants performed one block without stimulation. On the Sham-Verum day (SV), the first block with Sham stimulation followed by the second block with Verum stimulation. On the Verum-Sham day (VS), the blocks order reversed.
Results: After-effects of the stimulation did not produce any significant changes either in behavior (accuracy in the task) or resting-state EEG (theta frequency band spectral power in the first experiment. In the second experiment, 6 Hz tACS delivered before the WM task was not able to produce any observable changes in working memory performance. The same hold true for online stimulation.
Conclusions: Theta frequency tACS applied to Fpz-CPz electrodes is not an efficient method to improve WM.

Keywords: Working memory; EEG; tACS

EPP1074

An hiv infection - a problem of quality of life!?

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Introduction: The quality of life is a multidiimensional and subjective construct, based on the patient's experience.
Objectives: The objective of this study is to observe if at the HIV - positive patient the quality of life in relation to health is a consequence of disease and treatment and if his perception about the disease changes his ability to have a full and useful life.
Methods: We centralized the data coming from a number of 600 patients registered in the Iasi Regional Center, for a period of 12 months. The side effects reported by the patients emerged from discussions with the infectious diseases specialist and the psychologist.
Results: From 600 pacients, 59% of them were male with mean age of 21.1 years old. Approximately 14% of the patiens had stable jobs, the rest were unemployed or had part-time jobs. 38% came from foster care units of from broken homes. The average number of days of hospitalization was 4 days, 25% of them were at their first scheme, 10% in the seventh-eighth scheme. Among the antiretroviral side effects patients complained nausea and vomiting in 85% of cases, lipodystrophy symptoms in 25% of cases, diarrhea in 15% of the cases; regarding the psychological aspects, 65% of patients showed an above level of anxiety, 40% had depressive manifestations, 10% had specific obsessions-compulsions and 10% neurotic and hysterical tendencies.
Conclusions: We need a close collaboration between the infectious diseases specialist and the psychologists in order to enhance the quality of life of the HIV patient.

Keywords: quality of life; side effects; antiretroviral therapy; HIV/AIDS

EPP1075

Ssri-treated psychiatric disorders prediction with AI

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Introduction: SSRI-treated psychiatric disorders (STPD), such as general anxiety disorder and major depression disorder, are common psychiatric diagnoses. Serotonin-mediated effects of solar insolation are an active topic of research. Artificial intelligence (AI) could help to better examine that complex relation.
Objectives: To investigate whether AI could predict the STPD relying primarily on average ambient temperature and annual solar insolation.
Methods: Data of age, average ambient temperature and annual solar insolation were employed to predict STPD status in 7,587 subjects using an AI. To simplify the data analysis, only individuals with white ethnicity were assessed. SPTD prevalence was 17.1%. The AI was conservatively tuned to maximize the positive likelihood ratio considering predicted and real STPD statuses. The free and open source programming language R was used for all the analyses. Dataset source: Wortzel, Joshua; Kent, Shia; Avery, David; Al-Hamdan, Mohammad; Turner, Brandon; Norden, Justin; Norden, Michael; Haynor, David (2018), "Data for: Ambient temperature and solar insolation are associated with decreased prevalence of SSRI-treated psychiatric disorders", Mendeley Data, V1, doi: 10.17632/trs43ybh92.1
Results: Predictions obtained a positive likelihood ratio of 4.850. The results were indicative of fair performance.
Conclusions: AI might be useful to predict STPD. Furthermore, the results of this study might indicate a moderate effect of age, average ambient temperature and annual solar insolation on the probability of STPD occurrence. Finally, the AI used in this study is freely available, allowing anyone to experiment.

Keywords: mood disorders; anxiety disorders; Artificial Intelligence; serotonin

Psychosurgery & stimulation methods (ECT, TMS, VNS, DBS)

EPP1076

Assessment of cognitive function following a course of electroconvulsive therapy

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Introduction: ECT is a potentially life-saving treatment for patients with severe or treatment resistant depression. Cognitive function disturbances following ECT are generally transient, but could be of longer duration in some cases
Objectives: To assess the cognitive side effects in patients with affective disorders treated with a course of electroconvulsive therapy (ECT).