

Methods: Young adults (n=270) performed a simplified virtual slot machine producing wins, two types of near-misses (before/after payable) and full-misses, with simultaneous measurements of heart rate (HR) and skin conductance responses (SCR). Self-reports of perceived chance of winning, pleasure and motivation to play were given by the participants on each trial.

Results: Near-misses were associated with the largest HR acceleration compared to wins and full-misses, and larger HR deceleration and SCRs compared to full-misses. Differential autonomic and subjective reports were observed for near-misses subtypes, suggesting that near-misses are processed differently depending on their position before or after payable. Females showed larger SCR responses and increased motivation following wins compared to males.

Conclusions: Slot machine gambling outcomes elicit differential physiological and subjective responses in young adults. Specifically, near-misses produce larger autonomic responses compared to regular full-misses. However, near-misses are complex, multifaceted events producing various emotional responses depending on their characterization. Males and females respond differently to wins, highlighting the importance of considering sex differences in experimental research on autonomic responses in gambling.

Disclosure: No significant relationships.

Keywords: Gambling; near-miss; autonomic responses; sex differences

EPP0549

Assessment of the gifted adolescents' functional state of the organism under the psychological stress

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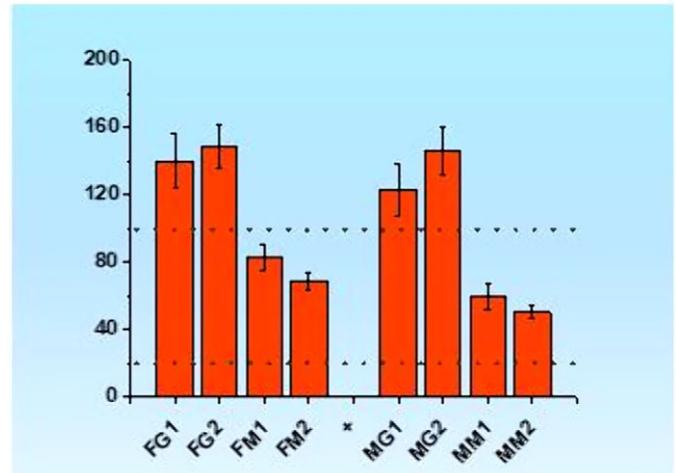
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Introduction: Many studies have shown that gifted children and youth have difficulties in education, emotional regulations, psychological adjustment process etc.

Objectives: Our aim is to evaluate the adaptive capacity, the functional state of the gifted adolescents' organism under external potential stressor.

Methods: The research has been conducted in schools of Yerevan, RA. The initial sample consisted of 500 high school students aged 16-18. Renzulli's Three-Ring Conception of Giftedness was used to reveal gifted adolescents. In the course of study 35 of 500 participants were defined as gifted. The quasi-experimental design has been used with 35 participants in the comparison and experiment group each. For comparative analyses, we used Heart rate variability (HRV) method. As a potential stressor, the intellectual workload was selected. The ECG indicators have been recorded for 5 minutes each before and after the intellectual workload. We are presenting the results through Stress Index.

Results: As we can see from the picture 1. the Stress Index (SI) of gifted girls and boys are higher from norm (the norm is 20-100). For control groups, the SI is within the norm. The SI for gifted groups of adolescents significantly higher from those of control groups. The data indicates, that for gifted adolescents the activity of central mechanisms prevails over autonomous mechanisms.



Conclusions: The level of stress in gifted adolescents is higher than that of the control group and rises in case when the task wasn't solved. High results speak about psycho-emotional tension and stress. Further research is needed to understand the psychological background of such reactions.

Disclosure: No significant relationships.

Keywords: Gifted adolescents; functional state; Stress Index

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Towards EEG Biomarkers of Emotional Burnout Syndrome: gender related variations in functional connectivity under Resistance stage formation

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Introduction: The phenomenon of burnout generates the most interest due to relation to complete or partial disengagement of emotions, cognitive impairment, impairment of long-term and working memory. The neurophysiological mechanisms of emotional burnout remain insufficiently studied. Data related to gender specific characteristics of burnout formation are contradictory.

Objectives: To establish the gender related EEG markers of burnout was our aim.

Methods: 621 volunteers (443 females) aged 18 to 24 years participated in this study. EEG was registered during the resting state (3 min, closed eyes condition). The interhemispheric and intrahemispheric average coherence across all EEG segments in all frequencies from 0.2-45 Hz was estimated. Psychological testing was performed before the registration of EEG. To determine the level of burnout formation the Boyko's Syndrome of Emotional Burnout Inventory (SEB) was used.

Results: The Resistance phase of emotional burnout was formed in 139 women and 42 men. Development of Resistance stage in female includes formation of new intrahemispheric connections predominantly in the left frontal region (alpha1,2,3-subbands) and the midline frontal-central axis (Fz-Cz, alpha1,2 and theta2-subbands).