

**PO-30**

**Increased brain sensitivity to near-misses in pathological gamblers**

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*Background and aims:* Near-misses during gambling are losing outcomes which come close to a win. These events are known to invigorate gambling behavior. Recent neuroimaging studies have shown that near-misses activate the brain 'reward system' – in particular the ventral striatum – suggesting that their invigorating effect might result from a false sense of reinforcement. Here we investigated whether near-miss-related brain activity is (1) enhanced in pathological gamblers, and (2) modulated by dopamine, which has been linked to reinforcement processes and pathological gambling. *Methods:* Two groups of pathological gamblers ( $n = 22$ ) and healthy controls ( $n = 22$ ) played a slot machine task delivering wins and near-misses in an fMRI scanner. Participants were asked to rate their gambling motivation, and played the task once under placebo and once under sulpiride (dopamine receptor

antagonist) in a counterbalanced manner. *Results:* Behaviorally, gambling motivation was higher in gamblers than in controls. At the brain level, near-misses elicited robust responses in the striatum, which were stronger in pathological gamblers compared to healthy controls. Group differences were specific to near-miss events, as the groups did not differ for win-related activity. However, the results did not show a reliable modulation of near-miss brain responses by sulpiride. *Conclusions:* Our results strengthen the hypothesis that near-misses reinforce gambling behavior by 'hijacking' the reward system, and that this mechanism plays a role in compulsive gambling behavior. The absence of pharmacological modulation by sulpiride, consistent with previous negative results (Porchet et al., 2013), suggests that the reinforcing effect of near-misses does not depend on dopaminergic mechanisms.

**PO-31**

**Technology addiction and alexithymia features in a sample of Italian adolescents**

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*Background and aims:* Difficulties in identifying and describing feelings may be positively associated with addiction to new technologies. Because of their inability to correctly identify and manage emotional states, alexithymic adolescents may overuse technologies to fulfil their unmet social needs. This study aims to investigate the relationship between alexithymia and Internet, games and mobile phone addictions. *Methods:* 230 Italian adolescents (51.74% males; age range = 13–20 years, mean =  $15.86 \pm 1.30$  years) were recruited from public middle schools located in Rome (Italy). Participants completed measures assessing multiple addictions (Shorter PROMIS Questionnaire, SPQ), mobile phone use (Mobile Phone Questionnaire, MPQ) and

emotional regulation (Toronto Alexithymia Scale, TAS-20). *Results:* Approximately 51.74% of adolescents (26.52% males) were at risk for one or more addictions on SPQ scales. Findings show significant positive correlations between TAS-20 total score and SPQ game addiction scale ( $r = .253$ ;  $p < .001$ ), SPQ Internet addiction scale ( $r = .297$ ;  $p < .001$ ) and SPQ mobile phone addiction scale ( $r = .423$ ;  $p < .001$ ). Furthermore, correlations between sleep disturbances related to mobile phone use and SPQ total score ( $r = .262$ ;  $p < .001$ ) were found. *Conclusions:* Overall, findings provide important evidence on the association between technological addiction, mobile phone-related disturbances and alexithymic features in adolescence.

**PO-32**

**Is there a Link Between Obsessive Compulsiveness and Exercise Addiction?**

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*Background and aims:* Early research suggests that exaggerated exercise is linked to obsessive-compulsiveness (Davis et al., 1995). In this survey-research, we studied the relationship between exercise addiction, high-intensity exercising, and obsessive compulsiveness. *Methods:* An online sample of 401 men ( $n = 198$ ) and women ( $n = 203$ ) volunteers (mean age = 27.7 (SD = 9.0) years) completed a demographic questionnaire gauging their exercise habits. Their obsessive compulsiveness (OC) and exercise addiction (EA) were also assessed with two common

psychometrically validated instruments. *Results:* Those who reported exercising at high intensity scored higher on EA ( $p = .009$ ), but not on the OC scale. A simple linear regression was calculated to predict EA based on OC that yielded a statistically significant regression equation ( $F(1,399) = 12.52$ ,  $p < .001$ ), but with a low  $R^2 = .030$ . Another linear regression testing the predictive power of the weekly hours of exercise on OC was statistically not significant. *Conclusions:* The results show that those reporting high intensity exercise habits exhibit higher EA than those