

SHORT TERM SCIENTIFIC MISSION (STSM) SCIENTIFIC REPORT

This report is submitted for approval by the STSM applicant to the STSM coordinator

Action number: CA16207 - European Network for Problematic Usage of the Internet

STSM title: Targeting compulsivity in behavioral addictions

STSM start and end date: 14/04/2019 to 28/04/2019

Grantee name: Mauro Pettoruso

PURPOSE OF THE STSM:

The main purpose of the STSM was improving my research skills in the field of behavioral addictions, with particular attention to similarities between gambling disorder and internet addiction in terms of compulsivity measures. Also, the STSM was aimed to investigate possible dimensional correlates of Problematic Internet Use, to further the understanding and develop novel valuable approaches for this emerging condition.

The key objectives of the short training scientific mission were:

- to develop new skills in the assessment of Problematic Internet Use
- to learn new tools to evaluate the compulsive dimension in patients with behavioral addictions
- to share skills that should be used in research aimed to develop new treatments for behavioral addictions.

DESCRIPTION OF WORK CARRIED OUT DURING THE STSM

The STSM lasted two weeks, during which I carried out a research training period joining to the Jon Grant's "Addictive, Impulsive and Compulsive Disorders" Lab.

During the training I worked closely with the research group, to analyze a large dataset exploring Problematic Internet Use in a sample of young adults (aged 18-29 years).

The investigation concerned the personality profile of PUI, as well as the correlates in terms of quality of life. The work consisted of daily meeting sessions with Dr Grant and his team, to discuss data analysis strategies and possible interpretation of the main findings. Work in the Lab also represented a unique opportunity to reflect upon the PUI disease construct and to learn about advanced research tools and scientific methodologies, applicable to the field of behavioral addictions.

In addition, I participated to fMRI sessions that were being carried out in relation to a research project exploring neural correlates of compulsivity. This experience provided me the chance to acquire more skills for the integration of neurocognitive and imaging tools.

Moreover, during my time in the "Addictive, Impulsive and Compulsive Disorders" Lab, I was trained on the use, as well as on the properties and the scoring process of the Cambridge-Chicago Compulsivity Scale, a very interesting and potentially fruitful instrument to explore the compulsivity dimension across disorders.

Finally, I participated to scholarly seminars and group discussions on future research directions, based on the integration of the most advanced neurobiological and behavioral research finding.

DESCRIPTION OF THE MAIN RESULTS OBTAINED

The work in the Lab produced two independent paper drafts.

The main finding of the first paper was the identification of different patterns of personality dimensions and difficulties in emotion regulation, across different risk groups for PUI in a sample of young American adults. In particular, while mainly subjects with PUI showed lower TPQ scores of Novelty Seeking, Harm Avoidance and Reward Dependence along with a more pronounced motor impulsivity, other relevant differences involved also subjects with high-risk, even though not yet problematic, usage of the internet. This finding corroborates the hypothesis that the development of PUI could be described in terms of trajectories from risky behaviors to addiction.

Our idea for the second paper was based on the hypothesis that PUI may represent a relevant factor affecting quality of life among non-depressed young adults. The analysis confirmed this premise, sustaining the need for more efficient prevention screening and treatment intervention for PUI.

FUTURE COLLABORATIONS (if applicable)

We aim to validate an Italian version of the Cambridge-Chicago Compulsivity Scale; this could represent a great opportunity to promote knowledge and diffusion of a very useful instrument for the dimensional characterization of addictive disorders.

In addition, joining datasets could also further the exploration of cross-cultural differences in the field of gambling disorder and PUI.