7th World Congress on **Addictive Disorders & Addiction Therapy**

&

29th International Conference on **Sleep Disorders and Psychiatry**

July 16-18, 2018   London, UK

Comparison of EEG patterns between internet gaming disorder and healthy control group

Laehyun Kim[1, 2]
[1]Korea Institute of Science and Technology, Korea
[2]University of Science and Technology, Korea

Nowadays internet games are very popular especially for adolescents. Some of them play more than five hours every day and have difficulty to quit playing games by themselves. Preoccupation on internet game often becomes a behavioral addiction that deteriorates physical and mental health like drug addiction. The fifth edition of the *"Diagnostic and Statistical Manual of Mental Disorders"* (DSM-5) published by the American Psychiatric Association in 2013 says that Internet Gaming Disorder (IGD) is a condition for further study. Effective therapeutic methods of IGD are getting more importance. Recent studies have demonstrated that neuro feedback training helps addiction patients to improve mental health and control cravings. This study compared EEG pattern between IGD and healthy control (HC) group while the subjects were watching game playing videos that may arouse craving for the games. The IGD group were 22 young adults (Internet Addiction Test (IAT) score>60) and the HC group were 22 young adults (IAT score<40). The IGD group exhibited significantly increased relative delta and theta power on frontal area of the brain compared to the resting state but the HC group did not show any change on the same area. In addition, Delta/gamma power ratio was significantly increased for the IGD group over the whole brain unlikely for HD group. Previous studies discussed that addiction and depression patients showed increased slow (delta and theta frequency) EEG compared to healthy people. The present findings indicate that the IGD and HC group showed different EEG pattern when they watched visual stimulus arousing carving of games. Based on these results, we could detect individuals with IGD and the level of craving for effective neuro feedback training.

Biography

Laehyun Kim completed his PhD at University of Southern California, USA in 2003. He is a Principal Researcher at Center for Bionics, Korea Institute of Science and Technology and a Professor in the Department of HCI and Robotics, University of Science and Technology, Korea. He was a Visiting Scholar in the Department of Radiology, Harvard University.

laehyunk@kist.re.kr

Notes: