Development of a new treatment paradigm in pediatric psychology

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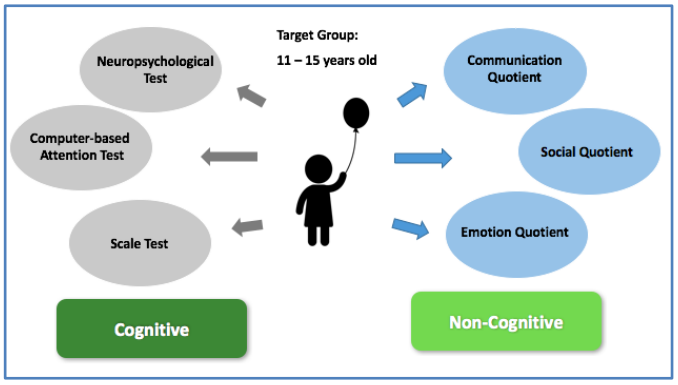
Abstract

Cognitive control functions are associated with a wide range of psychological processes, including but not limited to attention, memory, emotional and social processes. Deficits in such functions in children and adolescents are likely to cause problems such as learning disorder (LD) and attention deficient hyper-activity disorder (ADHD). It also may lead to poor social relationships and affect quality of life in the long run. Aim of the current study is to develop and validate a new treatment paradigm that considers both cognitive and non-cognitive functions such as social and communication skills as well as emotional control. In order to improve the accessibility of pre-existing treatment strategies, current study will develop a new form of computerized remediation therapy (CRT) program by implementing mobile-based virtual reality (VR) technology. This new method will open new possibilities in diagnosing and treating cognitive control deficiency by 1) acquiring natural response data (opposed to the types of data that are collected in more controlled settings, such as clinics or laboratories), 2) enabling treatment in an interactive and naturalistic environment, 3) employing artificial intelligence technology to extract principal index from complex multi-dimensional data, 4) strengthening personalized side in executing treatment programs. To achieve those objectives, this study will take an interdisciplinary approach among experts in cognitive and clinical psychology, brain science, artificial intelligence, and information and communication technology (ICT).

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Image



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6. Eom S, Caplan R, Berg AT (2016) Behavioral problems and Childhood epilepsy: Parent vs Child Perspectives. J Pediatr, DEC;179:233-239.
7. Eom S, Lee MK, Park JH, Lee D, Kang HC, LeeJS, Jeon JY, Kim HD (2016) The Impact of a 35-week Long-term Exercise Therapy on Psychosocial Health of Children with Benign Epilepsy. J Child Neurol. 2016, Jul;31(8):985-90



Biography (150 word limit)

Soyong Eom received the B.S. degree in Biology and B.A. degree in Psychology from Yonsei University, Seoul, Korea, and the M.A. and Ph.D. degrees in Clinical Psychology from the Yonsei University. She worked as a residency and research fellow in Department of Psychiatry and Neurology from Severance Hospital, Yonsei University College of Medicine. She studied as a research scholar at Ann & Robert H. Lurie Children's Hospital of Chicago in the Northwestern University Department of Pediatrics. Her primary research interests are neurocognitive function and psychological profile of pediatric patients with chronic illness. She has expertise in evaluation and therapeutic interventions for pediatric patients and their caregivers. Her systematic intervention based on cognitive remediation therapy (CRT) creates new pathways for improving psychological healthcare. Recently, she undertook research on factors and their impact on human adaptive function in Neurobehaviors and Brain Connectivity, and Development of ICT-based neurocognitive intervention program.

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