

THE EVER-LASTING PROCESS OF SELF-REGULATION THROUGHOUT THE LIFE SPAN: THE ALLIANCE BETWEEN AFFECTIVE NEUROSCIENCES, NEUROPSYCHOLOGICAL REHABILITATION AND NEUROPSYCHIATRY

Jukka Loukkola (organizer)

The symposium will start with a description of brain development and the neural networks that are crucial for the optimal maturation and the process for self-regulation. Implications to the development of cognitive, emotional and social skills will be outlined.

Neuropsychiatric disorders include a wide variety of syndromes that have a brain-derived background. The symptoms, causing difficulties in reciprocal and interactive communication, are based on the un-equilibrium of self-regulation as well as in motivational, cognitive and emotional balancing. A case example of a neuropsychotherapeutic rehabilitation process with a teenager with Asperger syndrome character will be described.

Motivational regulation includes cognitive and emotional knowledge about the state of mind and body functions. The information processing between different integration areas in the brain is mediated via five frontal-subcortical circuits. The specific areas of the frontal cortex are connected to certain lower brain structures, which are inevitable in motivational and behaviour regulation. The system also integrates the somatic and autonomous reflexes, the physiological machinery, into the regulation network.

The same brain structures are involved in both physiological, cognitive and emotional regulation. The motivational network in the brain underlies human emotion. A case example of a neuropsychotherapeutic rehabilitation process with an adult, who got TBI, will be described.

In order to have realistic tools and goals for the neuropsychotherapeutic intervention, a wide and well-structured neuropsychological investigation is needed. Understanding the underlying theories and concepts in neurosciences and functional integrity of brain-behavior systems and self-regulation helps the clinician to plan the assessment methods. The investigation itself should be seen as a therapeutic and emotionally meaningful process for the client. The wiring and tuning of the motivational machinery is the first priority for reciprocal and emotionally curing therapeutic co-operation. Neuropsychotherapeutic investigation is illustrated by a few clinical syndromes.

Authors:

Sajaniemi, Nina: Brain development and the neural networks for self-regulation: Implications to the development of cognitive, emotional and social skills.

Paavola, Liisa: The neuropsychotherapeutic process with a teenager with Asperger Syndrome characters: Diagnostic and rehabilitational perspectives.

Loukkola, Jukka: Motivational regulation and its effect on mental processing in neuropsychiatric disorders : A case example of an adult client with TBI.

Ylikoski, Raija: Neuropsychological assessment as a tool for understanding the neural networks and planning neuropsychotherapy.

Laaksonen, Ritva (Discussant)