

Natureza do trabalho: Resumo

TÍTULO

VIRTUAL REALITY IN MOTOR REHABILITATION OF PATIENTS WITH CEREBRAL PARALYSIS AFTER STROKE

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RESUMO

Introduction: Stroke is defined by the World Health Organization as an episode of abrupt and quick start of vascular origin reflecting alterations in encephalic function. Its importance does the fact of being responsible for the largest amount of serious physical sequelae, mainly motor disability. Therefore it is important to invest in the development of therapies, such as the Virtual Reality. The goal was to establish the relationship between the use of the Nintendo Wii with neuroplasticity in assistance of motor recovery of a lesion caused by a stroke. **Literature review:** The neuroplasticity induced by playing games is the adaptation of the nervous tissue and can occur by inhibition or excitation of neuronal balance. There may be expansion of cortical sensory maps, transfer function from one region to another, intensification or reduction of synapse change in membrane excitability of the neuron and anatomic-physiological alterations: formation of new synapses, sprouting of new axons, increased activation and migration of endogenous neural stem cells and angiogenesis. The reorganization of the motor cortex has importance in plasticity of injured tissue. These areas of interpretation of the movements can be replaced by other adjacent tissue when there is no incapacitation of this tissue. However motor training can also induce physiological and structural adaptations in areas such as the basal ganglia, cerebellum and red nucleus. The mirror neuron system can also contribute to the rehabilitation, they are found in the prefrontal cortex and the inferior parietal lobule being responsible for motor commands which shoot the production of simple skilled movements and also when someone else watches person performing the same movement. **Conclusion:** The bibliographic review allows us to conclude that the use of Virtual Reality has positive results in the treatment of motor paralysis after a stroke. This therapy has based neuroplasticity and mirror neuron.