

Natureza do trabalho: Resumo

TÍTULO

COMPUTER PROGRAMS FOR IMPROVEMENT IN ADHD

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RESUMO

Introduction: The attention deficit hyperactivity disorder (ADHD) is a developmental disorder with a strong neurobiological influence, most common in childhood and characterized by a persistent pattern of inattention and / or hyperactivity and impulsivity. The neurobiological origins of ADHD are not fully understood due to presenting an intense complexity of inhibitory and excitatory neurochemical processes. **Literature review:** The formation of the focus of attention is controlled by thalamocortical circuit. The thalamus selects the external stimuli and then are processed and passes to the cortex where are processed again. The nervous system affects this circuit by via mesothalamic through dopaminergic neurons toward the thalamic reticular nucleus. Dopamine inhibits the thalamic reticular nucleus by modulating inhibitory GABAergic. Thus dopaminergic changes affect the degree of focusing attention held by thalamocortical circuit, which undertakes the processing of attention. It may occur, therefore, the hyper focus in which attention deficit due to the difficulty of moving the focus of attention for several environmental stimuli, or defocus, which is generated by inattention excessive displacement of the focus of attention, not settling in any stimulus. **Conclusion:** The most appropriate treatment for ADHD is a combination therapy with the use of computer programs, since the medication will affect the internal focus, while the computer affect the external. Virtual environments stimulate the interest of the patient, creating a favorable environment for the training of the use of focus. While drug therapy acts on the dopaminergic pathway, controlling the release of this neurotransmitter. Thus, there is a degree of focus adjustment performed by the thalamocortical circuit.