Impact of Virtual Reality Cognitive and Motor Exercises on Brain Health

Beata Sokołowska¹ Affiliations expand

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Abstract

Innovative technologies of the 21st century have an extremely significant impact on all activities of modern humans. Among them, virtual reality (VR) offers great opportunities for scientific research and public health. The results of research to date both demonstrate the beneficial effects of using virtual worlds, and indicate undesirable effects on bodily functions. This review presents interesting recent findings related to training/exercise in virtual environments and its impact on cognitive and motor functions. It also highlights the importance of VR as an effective tool for assessing and diagnosing these functions both in research and modern medical practice. The findings point to the enormous future potential of these rapidly developing innovative technologies. Of particular importance are applications of virtual reality in basic and clinical neuroscience.

Keywords: brain; brain disorders; brain health; cognitive and motor functions; exercise; training; virtual reality.