Investigating the Proteus Effect: The Impact of VR Avatar Embodiment on Physical Agility in the Elderly

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Abstract

The primary aim of this study was to explore whether the use of a VR jazz drumming game could effectively enhance both the physical mobility and agility of older adults. A total of 37 participants were enrolled in an eight-week experiment, with each session lasting a focused half-hour per week. During these sessions, participants were fully immersed in a virtual environment where they practiced beating rhythms on a virtual drum kit. The Proteus effect posits that virtual character characteristics influence real-world behavior. The VR game was specifically designed to leverage the Proteus effect, allowing us to investigate its potential impact on participants' physical and cognitive engagement. The findings of this research suggest that VR-based gaming may serve as a highly beneficial and innovative tool for improving the physical agility of the elderly population. This study provides valuable insights into the potential of using immersive, technology-driven games to promote the well-being of older individuals.

Keywords

Elderly, Proteus effect, VR.