Using a virtual supermarket as a tool for training executive functions in people with mild cognitive impairment

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ABSTRACT

Cognitive and executive functions (EF) intervention programs for people with mild cognitive impairment (MCI) has not been studied enough, especially with the use of virtual reality. The purpose of the current study was to examine the effectiveness of using the Virtual Action Planning – Supermarket (VAP-S) to improve performance of a shopping task and EF among people with MCI. Seven participants with non-amnestic or multi-domain amnestic MCI completed the study protocol which followed an ABA single subject design. The outcome measures included the Multiple Errands Test (MET) to assess EF while performing a shopping task and the WebNeuro to assess EF impairments. Results showed that 4 participants improved their EF as assessed by the WebNeuro and 4 improved their performance of the shopping task in the MET. It seems that in some cases a learning effect occurred which explains why some of the participants did not improve. The results point to the potential of using the VAP-S as an intervention tool for training EF in people with MCI.