

Memory Lane: A neuro-exergame to mitigate cognitive decline in later life

<https://neurodegenerationresearch.eu/survey/memory-lane-a-neuro-exergame-to-mitigate-cognitive-decline-in-later-life/>

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Institution

1ST PLAYABLE PRODUCTIONS, LLC

Contact information of lead PI

Country

USA

Title of project or programme

Memory Lane: A neuro-exergame to mitigate cognitive decline in later life

Source of funding information

NIH (NIA)

Total sum awarded (Euro)

137613.7615

Start date of award

15/09/2016

Total duration of award in years

1

Keywords

Acquired Cognitive Impairment... Aging... Alzheimer's Disease... Alzheimer's Disease including Alzheimer's Disease Related Dementias (AD/ADRD)... Behavioral and Social Science... Brain Disorders... Clinical Research... Clinical Research - Extramural... Dementia... Neurodegenerative... Neurosciences... Physical Activity... Prevention

Research Abstract

? DESCRIPTION (provided by applicant): 1st Playable Productions and Union College propose to develop a commercializable product combining physical exercise and cognitive activities through interactive gaming on a stationary bicycle to help prevent cognitive decline and

dementia in older adults. The Interactive Physical and Cognitive Exercise System (iPACES) developed by Union College's Healthy Aging and Neuropsychology Lab is the first system to combine physical and cognitive interventions, and has already proven to have a greater cognitive benefit to older adults than either of these two interventions alone. While behavioral interventions are unlikely to completely prevent or halt dementia, there is the potential for synergistic physical and cognitive exercise specifically to reduce the risk of onset dementia or slow progression. Creating an affordable and easily distributed product will enable wide access to this intervention, while also furthering understanding of what combinations have biggest impact. This Phase I project includes the development of a game that combines physical and cognitive exercise, a hardware configuration that is safe for older adults and suited for in-home installation, and the further collection of user data to inform further developments in engaging design. Participants will be recruited from area retirement communities and advertising and screened for suitability. Participants are assessed after two weeks of playing the cognitive game, without exercise, then as participants engage in the full experience they are assessed at 2, 6, and 12 weeks. Normative individuals interested in maintaining brain health, patients who are prescribed iPACES to slow or ameliorate cognitive decline, retirement and assisted living communities are all potential beneficiaries of the dementia treatment. The incidence of dementia in North America is projected to nearly triple from 3.4 million cases in 2001 to 9.2 million by 2040, with a worldwide increase from 24 to 81 million over the same time period. Considering multiple causes of dementia, no known cure, and minimal benefit from medication, behavioral interventions to improve brain health are a critical component for extending quality of life for patients, families, and their support systems.

Further information available at:

Types:

Investments < €500k

Member States:

United States of America

Diseases:

N/A

Years:

2016

Database Categories:

N/A

Database Tags:

N/A