A COGNITIVE GYM FOR SENIORS

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The Health Factory is a platform for multidisciplinary collaboration combining the expertise of the different Aalto University schools in the field of Health Care development.
Problem: Need for new, more sensitive methods for diagnosis of post-stroke neglect syndrome

Earlier studies show that neglect is more likely to appear under multimodal stimuli.

Multimodal rehabilitation space, where tests are conducted and patient’s response to stimuli and strategy to pass the tests is documented and used for diagnostics and evaluating the progress of rehabilitation.

Physical space and software (tests and result analysis). Prototypes of the space built based on earlier technology, sensors, commercial lights etc. Software programmed by Aalto students.

Installation at HUCH. Customer tests to evaluate the effectiveness of the software and identify further development needs. Doctoral students in major role.

TEKES TUTL-funding for preparation of commercialization and finishing the "proof-of-concept" study. Building a team for commercialization.
What is a cognitive gym?
Purpose

“Reason: Demographic forecast
Design of an environment for combined cognitive and adapted motor training for seniors
Identify factors that potentially influence the architecture of a cognitive gym for seniors
State of the art

Cognitive training
Aerobic fitness
Motivation and quality of life
Virtual reality
Exergames
Interaction with technology
Gerontechnology
Tasks
Extrapersonal space
Several modalities
Number of players
Playground of characters

Results
Results

“Equipment and mounting

“Truss or other construction aids

“Background light control

“Background music

“Portability
Results

“Room Protection of equipment
What the room should not have
Multipurpose room
A mixed gym
Results

General

Low cost
Safety
Availability and accessibility

Telehabilitation
Conclusions

“Learning occurs at all stages of life.
Allow seniors to control and advance their well-being.
Allow seniors to enjoy the environment.
With enhanced cognitive skills.
Help society to spend less on health-care costs.”