Research

ExerG: An innovative digital solution to individually improve physical and cognitive functions using an exergame (video game-based) training in an ecologically valid and safe setting for the geriatric population

Trial registration number: -

Duration: 2021 - 2023

Status: ongoing

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Short summary: Life expectancy is rising continuously, but the gained years are often dominated by declining physical, cognitive and mental capacities. At the same time, there is a lack in personalized and meaningful training solutions, which would be able to significantly improve the quality of life for older adults by increasing independence, mobility and reducing the risk of injuries by decreasing the risk of falling.

The EXERGETIC project will develop an attractive, safe and effective training solution specifically for the geriatric population. The innovative training solution ExerG will be based on the ExerCube fitness game by Sphery AG, which in its current version is a proven highly effective and engaging exergame training (video game-based physical exercise) for young healthy adults. Following a user-centered design approach, hardware and software elements will be redesigned enabling an ecologically valid and meaningful training setting for the geriatric population. The ExerG solution will allow a holistic and concurrent training of physical (whole body movements) and cognitive (video game) functions depending on the individual requirements.

End-users will be involved during the whole process through focus groups, usability testing and finally in a pilot RCT. This user-centered and iterative approach will be highly important for the ExerG development.