
CONFERENCE ABSTRACT

Serious Games as an Integrated Care tool to support elderly people quality of Life ICIC20 Virtual Conference – September 2020

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Context

It is well known that each year the amount of elderly people is increasing and the life expectancy is longer in EU countries. So, obviously, it is important to include new tools in the socio-sanitary system to maintain and improve the life of quality of this target group.

Objective

The objective of this practice is to give alternative solutions through the technology. It has been developed a tool composed by package of video games to promote the physical activity, cognitive exercise and proper nutrition, taking into account from the beginning the preferences and specific necessities of the +65 years old people have been considered.

Description

The tool consists in a package of Android video games developed for tablet devices, and a centralized database that stores as much as data is possible from the games. These are the descriptions of the serious games:

- SG centred in mental health: a word matching video game with different difficulty levels. This video game serves as a tool to measure the mental speed of the users and helps to train and improve it.
- SG centred in appropriate nutrition: AR video game in which the user must select the healthier food from a set of 3 on each round. If the selection is correct the user will be rewarded with a point.
- SG centred in exercise: consists in a video game that promotes the physical exercise motivating the user to walk using rewards. The user is located in a real map using the user's real location, so some points must be reached. Using the rewarding method in combination with AR creates a powerful tool that motivates the user to do physical exercise and not stay in her/his house.

End users

The package can be used by the final users by themselves, or in cooperation with the caregivers and nursing homes, depending on the independency level of the older people. Up to now the tests were made in Spain with people (+65) without mental diseases. In the near future, the tool will be tested with 120 people in 3 different EU countries.

Sustainability

From the technological point of view, Android technology is used, so, the updating and maintenance of the project is quite easy. From a general sustainability point of view, the project is supposed to last without an ending date, as the necessity that this project is helping to fulfil will be always exist in our society, probably growing each year. The scale up of the project is quite easy, but probably some adaptations will be needed considering the cultural context.

Learned lessons

There is not a technological gap involving the tablet, the learning time is minimum, and the satisfaction got from the users is very high in general.

Additional information

These serious games are included as part of DAPAS AAL project (<https://dapas-project.eu>).