

*L. SNAPHAAN, I. BONGERS. The Virtual Reality Relax Tour as relaxation tool in community dwelling dementia care. Gerontechnology 2018;17(Suppl):177s; <https://doi.org/10.4017/gt.2018.17.s.172.00>*

**Purpose** In the last decades, an increase in relaxation techniques has emerged and it is now increasingly impossible to find the most effective way for each individual to relax<sup>1</sup>. Villani describes the importance in the combination of different relaxation techniques with Virtual Reality (VR)<sup>1</sup>. A study among students, shows a positive effect in reducing anxiety and increasing relaxation by VR<sup>2</sup>. Anxiety, together with apathy, depression, irritability and agitation, are the most prevalent behavioral and psychological symptoms of dementia (BPSD). These behavioral and psychological disturbances affect almost all people with dementia (56-98%) at some point during the progression of the disorder<sup>3</sup>. Current guidelines recommend non-pharmacological interventions as first-line treatment. To reduce anxiety and agitation, sensory interventions, particularly music therapy, aromatherapy and environmental modification could be helpful. Our hypothesis is that a VR relax tour could help people living with dementia to support them at home.

**Method** GGzE intensively collaborates with companies and knowledge institutes to maintain a social innovation platform (Innovate Dementia (ID) [www.innovatedementia.eu](http://www.innovatedementia.eu)). ID is an open innovation environment in which user experiences reveal future directions of product development. Each partner has its own role and responsibility in ID. GGzE is responsible for the set-up of user involvement. Users are defined as, people diagnosed with dementia, their relatives/informal caregivers and professional caregivers. These users are involved as co-creators and testers. To create and build user involvement, a user platform is formed in which (1) The (unmet) needs of people living with dementia are harvested and investigated, by implementing standardized questionnaires, home observations and in depth interviews; (2) Input is given by users for developing products addressing such a need, by brainstorm sessions, focus group meetings and workshops; and (3) Innovations are tested and evaluated in their home environment.

**Results & Discussion** Three iteration cycles were necessary to develop the VR Relax Tour for people living with dementia at home. Although the content of the Relax Tour application seems very promising and fits the individual needs of the users. The application itself is sometimes very hard to control for elderly. Specifically, one has to complete all the following steps to properly control the Relax Tour application: Charge a Samsung S7 smartphone, activate the VR relax tour app, insert into the Samsung Gear VR Oculus, and begin the Relax Tour by controlling with your eyes or mousepad at the side of the Gear. This study provides specific knowledge for the next iteration for developing a VR Relax environment for people living with dementia in a home situation, based on their own needs/wishes.

### References

1. Villani D, Riva F, Riva G. New Technologies for Relaxation: The Role of Presence. *International Journal of Stress Management* 2007;14(3):260-274
2. Gorini A, Repetto C, Gaggioli A, Riva G. Virtual Reality in the treatment of generalized anxiety disorders. *Studies in health technology and informatics*: January 2010
3. Cerejeira J, Lagarto L, Mukaetova-Ladinska EB. Behavioral and Psychological Symptoms of Dementia. *Front Neurol*. 2012;3:73

**Keywords:** social innovation, dementia, virtual reality, assistive technology

**Address:** Mental health care organisation (GGzE), Eindhoven, The Netherlands;

**E:** [liselore.snaphaan@ggze.nl](mailto:liselore.snaphaan@ggze.nl)