Alzheimer's disease (AD) is the most common type of dementia, and affects one in eight aged 65 and older (Alzheimer's Disease International, 2011). Prevalence studies estimate that the number of people affected will reach 81.1 million worldwide by 2040 (Ferri et al., 2005). As a consequence, the early detection and the treatment of AD and related disorders (ADRD) are considered as research priorities (Ballard et al., 2011).

(1) physical games (or exergames, i.e., games that promote physical fitness) can positively affect several health areas of the players with mild AD and MCI, such as balance and gait ([Padala et al., 2012](https://www.frontiersin.org/articles/10.3389/fnagi.2014.00054/full" \l "B54)), and voluntary motor control ([Legouverneur et al., 2011](https://www.frontiersin.org/articles/10.3389/fnagi.2014.00054/full" \l "B45)); (2) cognitive games (i.e., games which target cognitive improvement) can improve a number of cognitive functions, such as attention and memory ([Stavros et al., 2010](https://www.frontiersin.org/articles/10.3389/fnagi.2014.00054/full#B69); [Weybright et al., 2010](https://www.frontiersin.org/articles/10.3389/fnagi.2014.00054/full" \l "B73); [Rosen et al., 2011](https://www.frontiersin.org/articles/10.3389/fnagi.2014.00054/full#B63)) and visuo-spatial abilities ([Yamaguchi et al., 2011](https://www.frontiersin.org/articles/10.3389/fnagi.2014.00054/full#B78)); (3) both physical and cognitive games can have a positive impact on social and emotional functions, for instance they can improve the mood and increase positive affect and sociability ([Weybright et al., 2010](https://www.frontiersin.org/articles/10.3389/fnagi.2014.00054/full" \l "B73); [Boulay et al., 2011](https://www.frontiersin.org/articles/10.3389/fnagi.2014.00054/full#B15); [Yamaguchi et al., 2011](https://www.frontiersin.org/articles/10.3389/fnagi.2014.00054/full#B78)) and reduce depression ([Férnandez-Calvo et al., 2011](https://www.frontiersin.org/articles/10.3389/fnagi.2014.00054/full" \l "B32)). Very few studies investigated the effects of the use of games for social/emotional health (which encourage the players to link with their friends and/or improve their social and emotional life) in dementia, but the results are encouraging ([Boulay et al., 2011](https://www.frontiersin.org/articles/10.3389/fnagi.2014.00054/full#B15)).

itchen and cooking is based on a cooking plot, where participants can play four different scenarios/recipes: pizza, yogurt cake, chicken breast in cream sauce, and finally salmon wrap. In each scenario, participants need: (a) to select the correct ingredients from the fridge and cupboards, a searching task with engages object recognition and sustained attention (*gnosis* activity); (b) to plan which actions need to be performed, and in which order, a task requiring planning abilities (*executive functions* activity); and finally, to perform specific gestures to accomplish each action (e.g., to rotate the finger to mix the ingredients), a task which requires praxis abilities (*praxis* activity). Depending on the scenario, the number of objects to be recognized ranges from 5 to 7, the number of executive functions activities ranges from 5 to 8, and the number of praxis ranges from 7 to 13.

The game can keep track of the time spent playing a scenario and of the time spent on each of the game activities (gnosis, executive functions, and praxis), of the total number of scenarios played (successfully completed or not), and of the number of errors performed in each game activity.

A demo showing Kitchen and cooking can be seen on the website of the Association Innovation Alzheimer, at the following link: <http://www.innovation-alzheimer.fr/projets-en/verve-en/>