Gaming for Awareness

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Co-Designing a Digital Dementia Awareness Game

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It is possible to live well with dementia and many people with dementia are living active lives with the support of families, friends, and communities. As the risk of developing dementia increases, there is a pressing need to ensure that generations understand what dementia is and how to proactively support people in the community living with dementia (Alzheimer Disease International, 2019). While there are a number of positive initiatives, such as Dementia Friendly Communities (DFCs) (Alzheimer's Society, 2018), more are still needed to enable people living with dementia to receive the respect and support they need to continue to live active and healthy lives in the community.

In 2019, researchers from Queen's University Belfast received funding from the Dementia Services Development Trust (DSDT) to co-design a free digital dementia awareness game. Digital gaming or 'gamification' is becoming an increasingly common way to educate/train employees in both business and health sectors (Jagoda, 2017). Gamification is also used to educate healthcare professionals and the public about a range of healthcare topics (Carter et al, 2009, Carter et al, 2010, Poultney et al. 2016). For example, Chest Heart & Stroke Scotland developed a digital game which focused on helping professionals understand a stroke patient's journey (Focus Games Ltd, 2020). From our previous research and the work of others, it is evident that a 'serious' digital game has the potential to challenge people's thinking in a creative way.

The aim of this dementia game is to challenge misconceptions about dementia and promote awareness of the condition to a lay audience (e.g. shopkeepers, bankers, police, train drivers etc.) To help us take this work forward, we worked with a project team that included seven people living with dementia, three dementia advocates from local charity Dementia NI and six undergraduate nursing students from Queen's University Belfast.

This project team met together five times throughout the summer of 2019 to co-design the game. The first step was to identify the most pertinent misconceptions about dementia and how these could be addressed in the game. This process was supported by findings from previous focus-group interviews the researchers had undertaken with people with dementia in spring 2019. The project team decided that two key themes of the game should be around **Emphasising Capability – NOT Disability** and **Normalising Dementia** (Mitchell et al. 2020).

Working alongside gaming developer, Focus Games Ltd, the project team collectively co-designed the format of the game and this included the digital

interface, colours and animations used throughout the game. The project team also worked together to write all the questions which are included in the game. Once this process was completed, the game was shared with 20-30 people living with dementia (not involved in the project) for feedback. A short video of this co-production process can be viewed via: https://www.youtube.com/watch?v=UE7bOp6jyyw

The Dementia Awareness Game is an HTML5 web application with a supporting website. The game works on any device through a web browser and only takes a few minutes to play. Players answer random questions, from an existing question bank, about dementia. If players get a question correct, they progress in the game. The Dementia Awareness Game takes approximately 90 seconds to play and players can have multiple attempts, as questions are randomly generated. Players receive feedback and further information on each question they answer in the game.

The game was field-tested in winter 2019 amongst members of the public. The project team asked players to complete the Approaches to Dementia Questionnaire (ADQ) before and after playing the game to determine if playing the game could change a player's perception of dementia (Lintern & Woods 2001). Over a four-week period, 500 people played the game and completed the questionnaires. The findings from this study demonstrated that after playing this game there was a statistically significant improvement ($p < 0.000$) across all domains of the questionnaire, showing more optimistic perceptions of the abilities and the future of people with dementia and what might be achieved by them; recognising people with dementia as unique individuals with the same value as anyone else, and overall demonstrating a more positive attitude towards people with dementia (Carter et al. 2020).

Since this initial evaluation, the game has been played more than 3000 times and forms part of the nursing curriculum at Queen's University Belfast. The project team are currently exploring future opportunities to use gamification to promote dementia awareness to different audiences (e.g. children or healthcare professionals). In the meantime, we encourage you to break the myths, challenge the stigma, and share the knowledge. **To play the game please visit: www.dementiagame.com**

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