Caregivers' and families role in the implementation of a multi-sensory room in a nursing home

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Purpose This research presents an implementation study of an immersive multi-sensory room for people living with dementia. Nursing homes accommodate increasing numbers of people with dementia and with increasingly severe stages of dementia. With the growing pressure on care, a multi-sensory room may be a solution, by improving the social and emotional wellbeing of people with dementia (Goodall, et al., 2018). In this study a multi-sensory room called Sense-Garden (AAL/Call2016/054-b/2017) was implemented in a Dutch nursing home. Sense-Garden provides visual, acoustic, olfactory and tactile stimuli in a designated room, with comfortable chairs (1), soundproofing walls (2), wooden paneling (3), smart-TV (4), smart LED's, plants (5), fragrance dispenser (6) and the Sense-Garden module (Figure 1). The research focusses on the role of caregivers and family members in the use and adoption of the room. **Method** Focus groups were organised with family members of people living with dementia in the nursing home with the multi-sensory room. Topics were based on TAM, TAM2 and TAM3 (Venkatesh & Davis, 2008) and included Subjective Norm, Image, Output Quality, Result Demonstrability, Computer Self-Efficacy, Perceptions of External Control, Computer Anxiety, Perceived Enjoyment and Objective Usability. Data was recorded (with consent), transcribed, and analysed by means of thematic analysis (Verhoeven, 2020). **Results and Discussion** 22 Family members (10 male, 12 female) participated in the focus groups. Six participants were partner of the person with dementia, 13 were a resident's child; three were son- or daughter-in-law. Four participants had visited the multi-sensory room with their loved one. The study revealed three main psychological themes that influence the use of the multi-sensory room, namely: the level of knowledge about the room, how competent one feels to use the room independently and the need to connect with the person with dementia. Three-quarters of participants had no, little or incorrect knowledge of the room. The less knowledge one had the less inclined family members were to use the healthcare innovation. Written messages did not appear to be effective; personal communication by caregivers, however, did, as well as demonstrations. A low sense of competence was caused by anxiety to use the technology, an unclear interface and the effort it takes to visit the room. A higher sense of competence was mainly related to experience with technology, resulting in less anxiety to use the room: "Nothing can go wrong. The only thing is that they might not like it". The need for connection was only positively effecting the use of the room when family members were already familiar with the room, otherwise they were not aware of the care innovation and its usefulness. Perceived usefulness of the multi-sensory room was evident when family members had attended a demonstration. The perceived usefulness of the interface was considered negative even after a demonstration. Recommendations include: clear, non-written instructions; multiple social meetings; and emphasizing the communication and relational connection that can be strengthened between people with dementia and family members through the multi-sensory room.

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Figure 1. The multi-sensory room with tactile (1&3), visual and acoustic (2&4) and olfactory (5&6) stimuli