
CONFERENCE ABSTRACT

ConnectAble: Integrating Mood-Enhancing Products into Dementia Care—A Living Lab Approach for Patients and Caregivers

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Background: Half of the caregivers in residential care facilities have encountered problem behavior in people with dementia (PwD), including apathetic, wandering, agitation and aggression. With the absence of a cure and the aging population, the number of PwD is projected to rise significantly, placing additional strain on an already overburdened care staff. While many products are available on the market to improve the mood of PwD, they are underutilized in care facilities due to factors such as reluctance to adopt new technologies and limited knowledge of their effectiveness. This project aims to bridge this gap by evaluating products in real-life care environments, aiming to improve the well-being of both PwD and caregivers. Therefore, this project focusses on following goals: enhancing the expertise of caregivers in using products designed for PwD, evaluating and improving the mood of PwD and providing manufacturers with opportunities to test their products in real-life care settings.

Approach: Living Labs were established in collaboration with five care facilities across Flanders, involving 17 caregivers and 50 PwD showing problem behavior. In total, 8 products were selected based on their potential to positively impact the mood of PwD. The Living Lab protocol consisted of six phases: preparation, introduction, intervention, mid-term evaluation, reflection, and analysis. A web application was developed to record the mood of PwD before and after product usage through caregiver's observations and personal experience of patients. Additionally, wearables were used to objectively quantify mood in PwD.

The Living Lab started with workshops given to the caregivers covering product use and the evaluation process via the web application. After one and four months, semi-structured interviews with caregivers were conducted to evaluate the products. The interviews addressed aspects like first impressions, usability, appearance, safety, and overall experience. Collected quantitative and qualitative data on mood impacts will be analyzed to evaluate product effectiveness and to offer insight in product optimization for manufacturers.

Results: Living Lab activities ended in October 2024. Preliminary data analysis of the interviews showed that caregivers found it important that the use of a product is simple and self-explanatory with limited need for manuals. Although further research is needed, first results showed an improved emotional connection between caregivers and PwD through the use of some products. However, the tasks associated with the project created an additional strain on an already overburdened workforce, potentially diverting time away from essential patient care. Further

analysis on the interviews and data from the web application and wearables is needed to explore our findings.

Implications: Initial results showed that some products can improve the mood of PwD, thereby enhancing their overall well-being. By providing caregivers with effective tools and training, some products can reduce stress of staff by alleviating the emotional burden associated with dementia care. For manufacturers, real-world testing offered valuable insights to tailor their products to meet the specific needs of PwD and caregivers. Overall, the project fosters innovation in dementia care, integrating technology and evidence-based practices to enhance economic and social outcomes in healthcare.