

Use of Ambient Activity Technology in Residents Living with Dementia

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Background

- Research suggests residents living with dementia in long-term care (LTC) facilities often lack stimulation in their environments, which can lead to an increase in disruptive behaviours.
- Residents receive stimulation through recreational activities but this relies on the hours of recreational staff commonly working 9-5 work days.
- Usage of antipsychotics is the primary source of treatment for challenging behaviors
- It is suggested the integration of non-pharmacological approaches into LTC facilities may reduce the severity and frequency of challenging behaviours displayed by residents with dementia.
- The development of new technology presents the opportunity for 24/7 interactions and experiences within the long-term care setting.
- Ambient Activity Technologies have developed ABBY, an interactive computer display, which can be mounted in the hallways of LTC units to provide a means of entertainment and stimulation by providing access to personalized photographs, video and music preferences.

Objectives

The purpose of this research is to investigate the impact ABBY can have by:

- Mitigating front line caregiver distress by providing residents in LTC facilities the opportunity to engage with Ambient Activity Technology "ABBY" by using it as a therapeutic tool.
- Minimize displays of disruptive behaviours by decreasing levels of boredom.
- Improve visitor satisfaction by providing meaningful activity that families can enjoy with residents.

Methods

A mixed-methods study was conducted to:

- Assess the impacts on residents, family and staff.
- Provide adequate support to support the effectiveness of technology in the LTC facilities.

Setting/Sample:

- Study was conducted at Loch Lomond Villa LTC facility which provided a convenience sample.
- A sample population of 35 residents, 17 staff members and 11 family members were employed in the study.

Data Collection

Resident data tools:

- Demographics
- BEHAVE-AD
- Cornell Scale for Depression in Dementia
- Barthel Index of Activities of Daily Living
- Quality of Life In Alzheimer's Disease
- Cohen-Mansfield Agitation Inventory
- Resident use Of Anti-psychotics
- MMSE
- Resident Diary

Staff data tools:

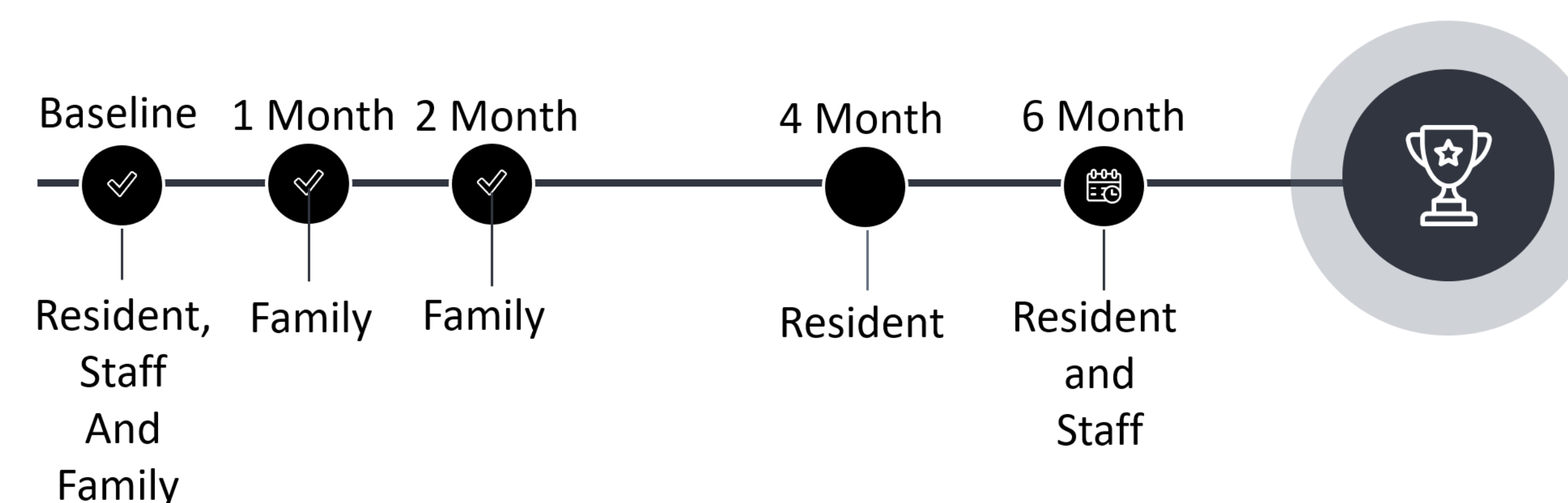
- Demographics
- Strain scale
- Focus Groups

Family data tools:

- Demographics
- Visitor satisfaction questionnaire
- Focus groups



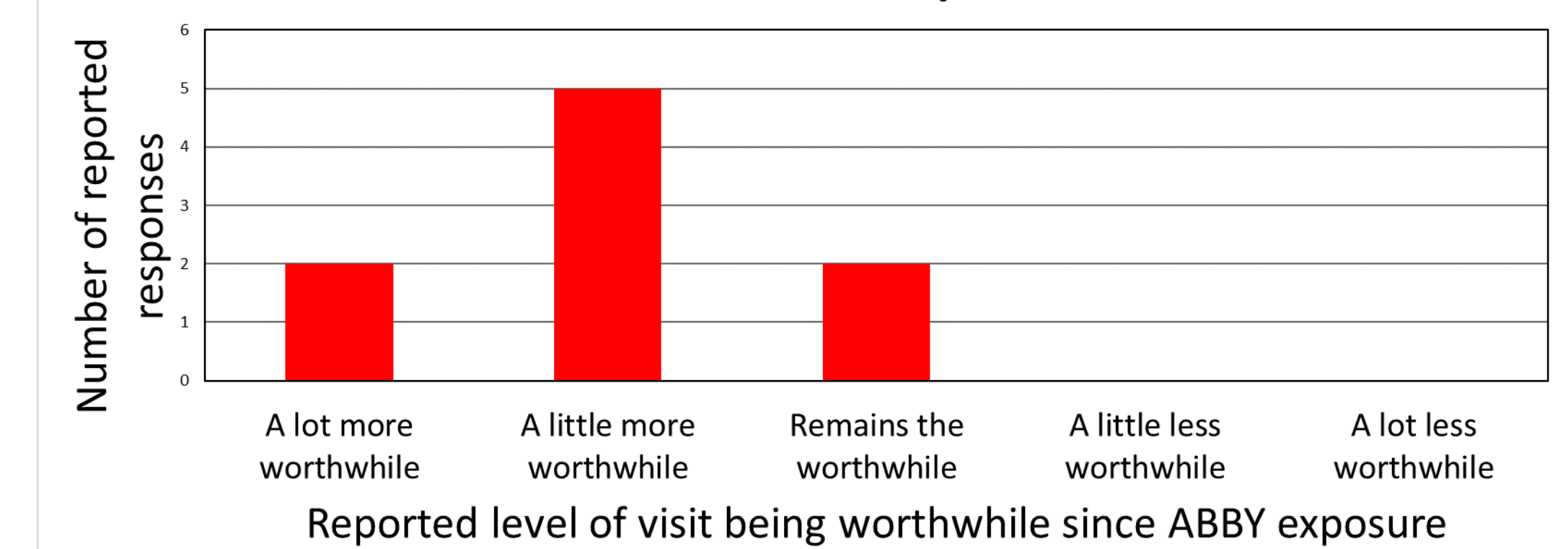
Figure 1: Data Collection Timeline



Preliminary Findings

- The initial findings demonstrate that ABBY is a positive therapeutic tool that can be used by residents, staff and family members to increase stimulation for residents living with dementia in LTC facilities.
- Initial staff reports suggest that ABBY is well accepted by LTC staff as a recreational activity which can be accessed 24 hours a day.
- When asked, family reported that ABBY has increased how worthwhile their visits were.

Figure 2: Reports of how worthwhile visits were after 8 weeks of ABBY exposure.



Discussion

- The findings suggest that technology may improve the quality of life for residents and staff in LTC facilities.
- Technologies similar to ABBY may facilitate better visitations by family members and friends.
- Staff members may use devices similar to ABBY to get closer to residents and see elements of their past.
- The use of ABBY may assist in reducing the display of disruptive behaviours among residents living with dementia, which could minimize the use of pharmaceuticals within LTC facilities.
- Further research and innovation is needed in the area of implementing technology in the long term care setting to continue to improve care for the aging population.

Reference

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