Understanding the Impact of Socialisation Robots on the Social Engagement of Older Adults with Cognitive Decline

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Background
This study is being conducted in four residential aged care facilities in Western Australia using the Zorabot; an interactive, humanoid, socialisation robot. Every Zorabot has a family name and Brightwater’s Zorabot is named Alice. Alice is controlled by a staff member through a tablet at all times.

Aims
1. Investigate the impact of a socialisation robot on the social engagement of older adults with cognitive decline.
2. Explore staff attitudes towards the use of robot technology within aged care.

Methods
There were three interventions used to investigate how Alice can best be incorporated in aged care:
1. Standard activity groups – a control measure of current groups without Alice
2. Alice facilitated activity groups – The same groups as intervention 1 with Alice involved
3. Alice specific activity groups – New groups constructed from learnings from interventions 1 and 2, ran by Alice

Each intervention ran for eight weeks. The Pool Activity Level (PAL) Tool was used to measure social interaction of residents at every group.

Staff attitudes towards robots have been assessed pre and post using the Frankenstein Syndrome Questionnaire and the Negative Attitudes towards Robots Scale, staff focus groups were also conducted.

Social Engagement
Alice co-facilitated Bingo, Reminiscence, Poetry and Exercise groups in the second intervention phase, this included welcoming residents to groups with a song/dance, joining in exercise, reading poems and giving comments. Staff recorded their observations of residents at every activity and found that residents enjoyed having Alice as part of their therapy groups.

“Engaged and requested songs, commented that Alice knew good singers after the group sang songs”, “Keen to attend Bingo, sang along with Alice during the introduction song”, “He was aware of his surroundings and smiled when Alice clapped”

Currently Alice is running two therapy wellbeing groups developed by staff with resident input as part of intervention 3. These two groups are a singing group and a games hour. Groups ran specifically by Alice appear to be more engaging for residents and staff, full results are yet to be collated and residents will be interviewed at the conclusion.

Staff Attitudes
Staff initially had varied and diverse attitudes towards robots, however the majority attitude was positive. In focus groups staff expressed their main concerns were for residents.

“If we could offer something more to the residents you know including a new technology and a new intervention that will be a really great thing”.

A snapshot of staff responses can be seen in the figure below.

Understanding staff needs and involving staff in the process of incorporating Alice into therapy programs has been key to the success of this project. The design of Alice allows staff with both high and low technology expertise to utilise her to her full potential for residents.

Staff post project attitudes have not yet been gathered although many have expressed positive attitudes towards Alice and wish to use her on a permanent basis following the conclusion of the research project.

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