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Suggested Research Proposal to CEAH and Park Danforth

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**Impact to Seniors Mental Health and Well-being by Use of Smart
Speakers and Smart Video units.**

Contributors

- 1.) UNE CEAH Director, Tom Meuser and associated students.
- 2.) Park Danforth Life Enrichment Director, Mandy Yates, and associated senior residents.
- 3.) One Smart Home owner, Phil Mason

Background

As seniors are able to communicate more easily with friends and family, their mental health is likely to improve. They might not feel so isolated from society. They get to share the joys and sorrows of life with friends and family more often. They become more of a part of society and feel included, which is a key to having good mental health.

A paper published in JMIR 5(2) [1], April, 2022, describes a 3 month study funded by HUD, in which low socio-economic seniors were supplied with Amazon Alexa Echo smart speakers. They were trained to use them for accessing music, news, and reminders. The researchers conclude that future studies were needed that provide more upfront training and “develop and promote more specific options for older adults, particularly in the area of health and well-being.”

Resources

One Smart Home will provide consulting, design, install, setup, and education of seniors on effective use of smart devices such as the Amazon Alexa Echo and Amazon Alexa Echo Show: cost effectively, well designed systems, timely, and provide training to the residents and UNE students. One Smart Home will investigate providing funding for its services. UNE CEAH, One Smart Home and Park Danforth will collectively investigate providing the smart devices. One Smart Home will also specifically provide training for use of the smart devices to the UNE students and the Park Danforth residents. One Smart Home will administer training to 20% of the study's scholars with UNE students attending in order to generate best practices for training the residents. UNE students will then provide training to 80% of the residents. One Smart Home will also provide a presentation to seniors about available smart device features, and ask them to determine which ones they want to have training on. One Smart Home will also generate a presentation for training UNE students on the use of the smart devices.

UNE CEAH will provide research students and research and publishing expertise. UNE CEAH will investigate providing funding for research and the UNE students. CEAH will also provide credibility for reporting on seniors' mental health, and the methodology for assessing the seniors' mental health .

Park Danforth will provide access to residents for the install of the smart devices in their apartments and resident training. All of the apartments have internet access readily available.

Proposed Evaluation

CEAH (Center for Excellence in Aging and Health) at the University of New England will monitor over time the effect on seniors' mental health of having and using smart home devices such as an Amazon Alexa Echo smart speaker, or a smart video unit such as the Amazon Alexa Show. These devices could enhance communications with people inside and outside of the retirement home. A methodology for assessing the seniors' mental health over time will be implemented. Close attention will be paid to the preliminary smart device training and ongoing support for the seniors in order to realize the true benefit of the smart home devices. One Smart Home will provide consulting, design, install, setup, and education of seniors on effective use of smart devices such as the Amazon Alexa Echo and Amazon Alexa Show. Park Danforth senior residents will become Legacy Scholars, i.e. become the participants of the study.

Expected Outcomes

The seniors are anticipated to have better mental health over time, Park Danforth enjoys publicity about the study and increased attractiveness to the retirement home and CEAH performs the research and publishes on it.

Reference

[1] McCloud, R., Perez, C., Mesfin, A.B., and Viswanthan, K. (2022). Using smart speaker technology for health and well-being in an older adult population: Pre-post feasibility study. JMIR Aging, 5(2) doi:<https://doi.org/10.2196/33498> .