Experiences of Older Adults Using Smart Home Technology in a Senior Living Community.

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**INTRODUCTION**

- Golant (2017) proposed older adults (OA) will adopt smart home (SH) technologies if use is perceived as having advantage over traditional coping strategies.
- Investigators found home safety and perceived independence in daily occupations were negative predictors of SH adoption by OA (Arthanat, Wilcox, & Maccchi, 2018); however, there are no research publications on experiences of SH technology adoption.
- Researchers from St. Catherine University partnered with a senior living organization and a technology provider to study the adoption of SH technologies by OA living independently.
- Older adults who received the technology and their designated family members were interviewed to ascertain the impact of the technology on daily activities and communication.

**OBJECTIVES**

- Understand how OA living independently in a senior living community and family members experience SH technology use.
- Determine whether SH technologies affect activity level, sense of well-being, and communication.

**METHODOLGY**

- Phenomenological qualitative study examining the essence of adopting SH technology into the context of one’s daily life.
- Study reviewed / approved by St. Catherine University IRB.
- SH technology installation options included pressure and motion sensors, and Amazon Echo.
- Older adults and family members received an app to view activity pattern data and receive alerts of unusual activity.

**Interview Timeline**

- Participant pre-installation Nov-Dec 2017.
- Participant and Family 2 month post-installation April 2018.
- Participant 8 months post-installation Dec 2018.

- Convenience sample of 10 participants from a senior community.
- Researchers coded interview transcript data using NVivo® software and modified grounded theory.

**REFERENCES**


Images retrieved from:
- https://www.bestbuy.com/site/smart-home-technology/?p=s&c=prv&pmc=1532420940237
- http://4.bp.blogspot.com/-YqBbhubQzDA/Ungy8Rp26mI/AAAAAAAABNc/5hEIl2l3Ks/s1600/arruguitas.jpg

**RESULTS**

- 5 female participants and their family members completed the study.
- The phenomenon of SH technology can be described by:
  1. Experiences with newly provided SH technologies
    - Daily activities, sense of well-being, and communication stayed pretty much the same.
    - Don’t need the technology but use Alexa for fun and to organize myself.
    - Could see it being beneficial for others.
    - Data patterns and notifications are comforting to family.
  2. Contextual Influences on that experience
    - This (senior living community) is a wonderful place to be.
    - They (staff) check on us everyday and there isn’t anything they won’t do for us.
    - We keep in touch (with family) and have a checking-in routine.

**DISCUSSION AND CONCLUSION**

Study results are consistent with Golant’s (2017) theory and Arthanat et al. (2018) findings on SH technology predictors of adoption and use.

Participants of this study perform occupations independently, have family and staff support and do not perceive SH technologies as advantageous.

Both OA and families think SH technology may benefit those with declining health or living alone, outside a senior living community.

Independent OA do not feel SH technology changed daily activities, sense of well-being, or family communication.

Family members feel peace of mind viewing sensor activity patterns.

Future studies might address experiences of OA living alone in rural communities.

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