

St. Catherine University

**SOPHIA**

---

Occupational Therapy Faculty Scholarship

Henrietta Schmoll School of Health

---

4-2019

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

Karen M. Sames OTD, OTR/L, FAOTA  
*St. Catherine University, kmsames@stkate.edu*

Jennifer A. Hutson PhD  
*St. Catherine University, jahutson@stkate.edu*

Skye M. Thompson  
*St. Catherine University, smthompson862@stkate.edu*

Follow this and additional works at: [https://sophia.stkate.edu/osot\\_fac](https://sophia.stkate.edu/osot_fac)



Part of the [Occupational Therapy Commons](#)

---

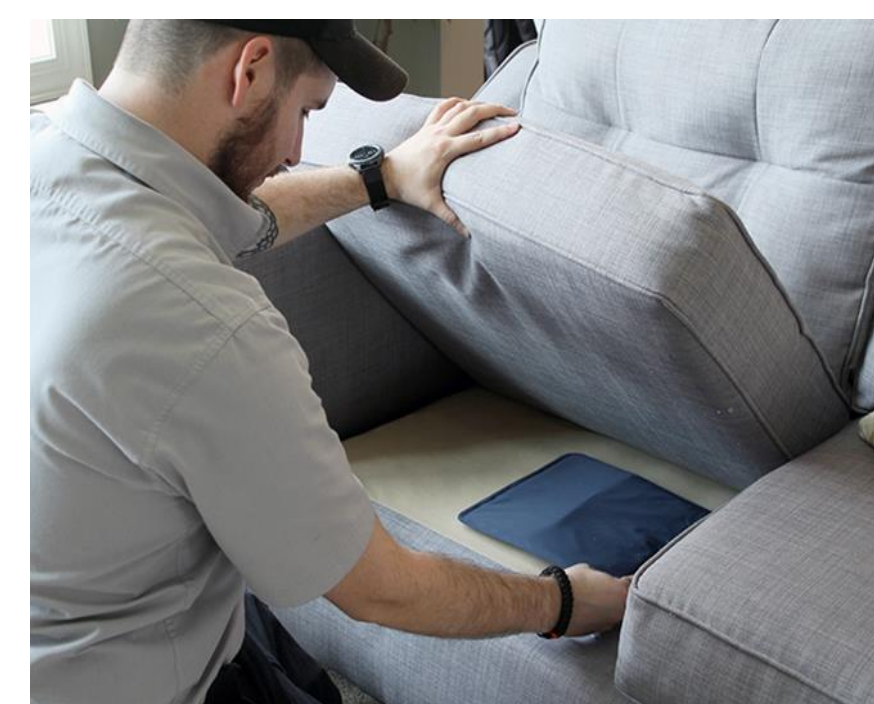
### Recommended Citation

Sames, K.M., Hutson, J.A., & Thompson, S. (2019). Experiences of Older Adults Using Smart Home Technology in a Senior Living Community. Poster presented at the American Occupational Therapy Association Annual Conference in New Orleans, LA.

This Poster Session is brought to you for free and open access by the Henrietta Schmoll School of Health at SOPHIA. It has been accepted for inclusion in Occupational Therapy Faculty Scholarship by an authorized administrator of SOPHIA. For more information, please contact [amshaw@stkate.edu](mailto:amshaw@stkate.edu).

## 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, & Macuch, 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

## REFERENCES

- Arthanat, S., John Wilcox, J. & Macuch, M. (2018). Profiles and predictors of smart home technology adoption by older adults. *OTJR: Occupation, Participation and Health*, 00, 1-10. doi: 10.1177/1539449218813906
- Golant, S.M. (2017). A theoretical model to explain the smart technology adoption behaviors of elder consumers (Elderadopt). *Journal of Aging Studies*, 42, 56-73.

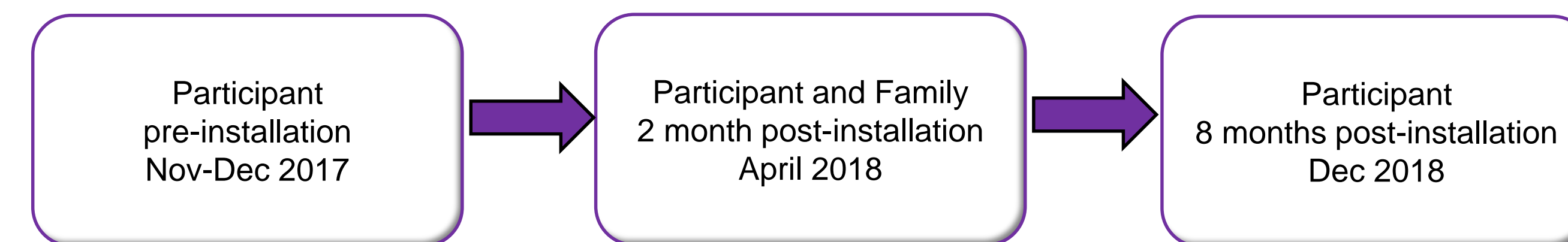
Images retrieved from:

- <https://corporate.bestbuy.com/best-buy-assured-living-lets-aging-parents-stay-at-home/>
- <https://www.bestbuy.com/site/assistive-technology/senior-technology/pcmcat1522420940237.c?cp=2&id=pcmcat1522420940237>
- <https://cotavic.org.au/2018/07/number-of-homeless-older-women-increase/>
- <http://4.bp.blogspot.com/-VHpdbuQ9zDA/Ungy8Rp26ml/AAAAAABNc/5hEII2I3Ks/s1600/arruguitas.jpg>
- <https://opentextbc.ca/teachinginadigitalage/wp-content/uploads/sites/29/2015/02/Older-woman-studying-2.jpg>

## METHODOLOGY

- 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



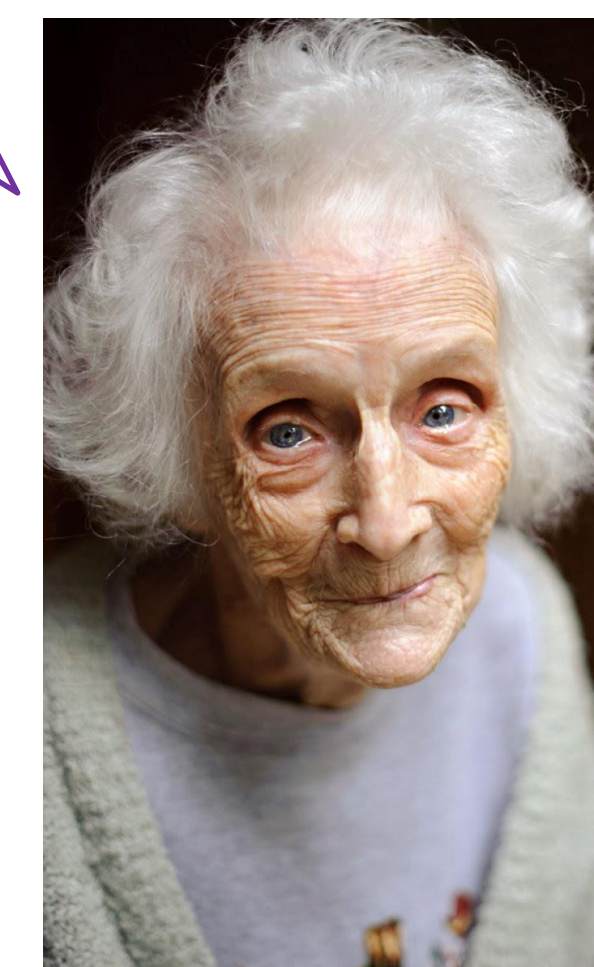
- Convenience sample of 10 participants from a senior community
- Researchers coded interview transcript data using NVivo® software and modified grounded theory

*"I would just think it (the technology) would be so comforting for people living alone"*

*"I always tell her good morning, and then she tells me something"*



*"It gave her peace of mind when she was using it"*

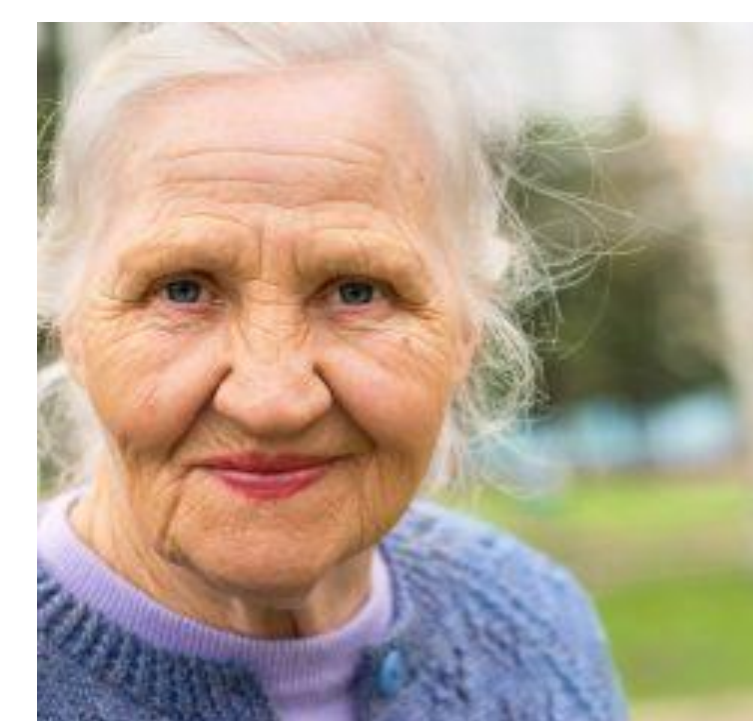


*"Because, I just do a usual day and I don't pay any attention to it (dashboard)"*

*"It's been a convenience than more of a safety net"*

*"We realized we weren't personally going to benefit from any of this equipment"*

*"I used it (Alexa) a lot in the beginning"*



*"I don't think so (sense of well-being affected by the technology) because I think in this place that they keep good check on us and if we want anything we can let them know"*

## 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.'s (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.

## ACKNOWLEDGMENTS

We would like thank both our community partners and participants for sharing their experiences and contributing to the research study

Funding from the GHR Foundation through St. Catherine University