

Influence of Culture on Older Adults' Adoption of Smart Home Monitoring

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Background / Significance

Innovative housing solutions are needed for safety, QOL, dignity, and decreasing the cost of care in the growing aging population.

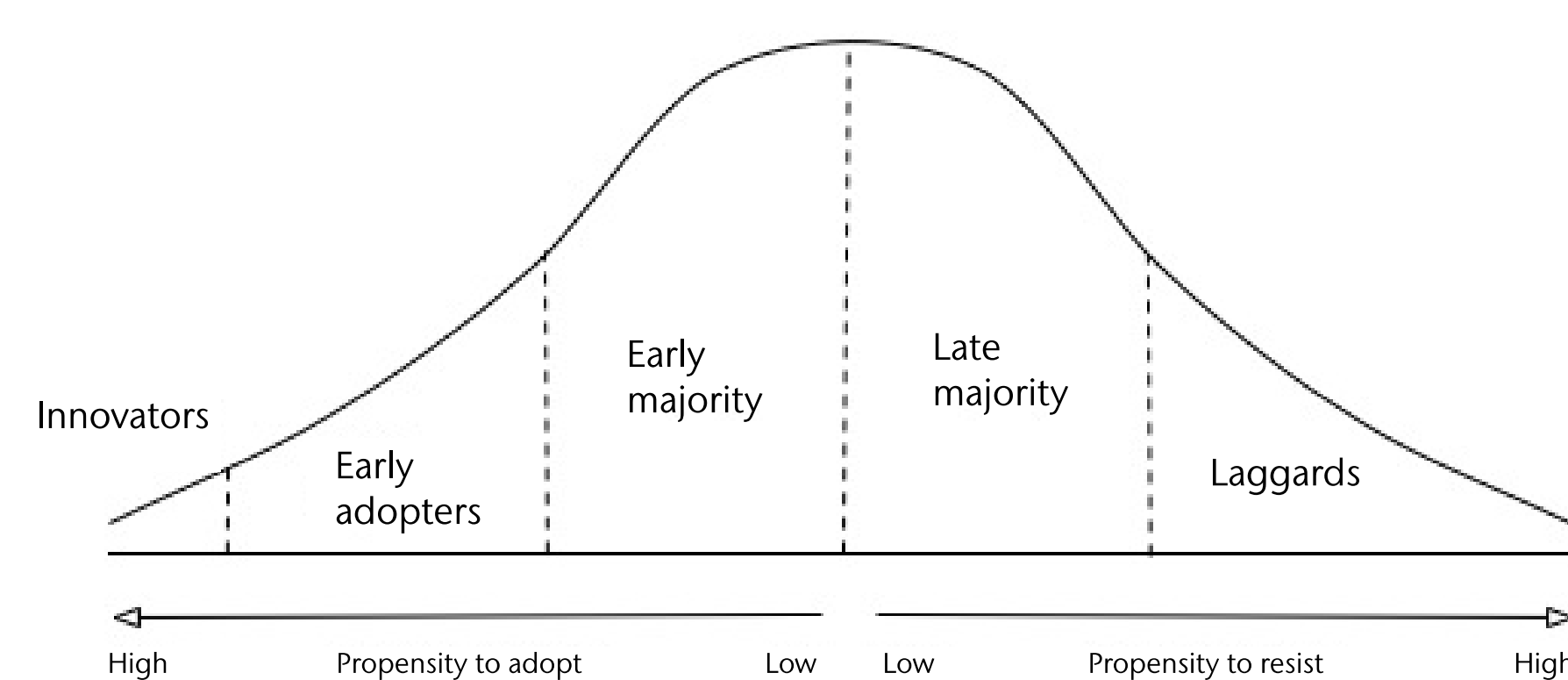
Health-assistive smart homes use intelligent sensor monitoring to help older adults age in place safely and with a better QOL. Consumer adoption is critical to the viability of this solution.

How are innovations adopted in a population over time?



Theoretical Framework

Rogers' Diffusion of Innovation



Methods

- Qualitative descriptive with content analysis
- In-depth email interviews
- Naturalistic inquiry
- Common themes
- Low inference
- Rich text of participants' own words

Sample Description

N = 21
Age span: 65 – 96

Variant Voices:

Gender	Socioeconomic status
Race / Ethnicity	Education level
Religion	Disability
Sexual orientation	Immigrant
Region of U.S.	Rural / Urban

Research Questions & Formative Findings

1. What is commonly known about smart home monitoring by older adults?
"zero" and "almost nothing"

2. What are the influencing factors in older adults' decisions to adopt smart home monitoring?

Culture	Cost	Need
Timing	Privacy	Desire to age in place
Trust	Safety	Caregiver fatigue
Features	Functionality	Individualized technology
Alone	Family	

3. How do older adults' perceptions of their own socially constructed values and beliefs influence their decisions to adopt or not adopt smart home monitoring?

"Culture definitely has a role in a person's decision to use or not use smart home technology."

"My culture has been shaped by living nearly all my life in the same place... There is also a personal pride to 'take care of one's own' that is a deep part of our culture."

"I do not think one's cultural value has any impact on either the acceptance or the use of smart home technology in the US."

Implications

- **Clinical Practice:** Safety, Privacy, Advocacy, Patient Education
- **Nursing Education:** Technology Literacy Levels, Forward Thinking
- **Health Policy:** Cost, Gerontechnology Literacy Gap, Internet Connectivity, Patient Rights & Health Data
- **Research:** Adoption, Machine Learning, Interdisciplinary, Participatory

Themes

- Privacy
- Trust
- Being watched
- Family
- Timing
- Cost
- Features
- Functionality
- Human touch

What Older Adults Know and Want

"I have already decided that I want to live in my home as long as forever is."

"We may be old and our arthritic hands and feet don't work very well, but **we are still interesting people who are contributing to the world.** KEEP THE TECHNOLOGY SIMPLE AND SAFE!"

"Even though at 78 I am still fully ambient, swim and exercise several times a week; I am becoming aware of what may be waiting for me in the near future. I am so happy that there are possible **techno/cyber answers** that can make this dismal future more palatable."

I would hope [smart homes] could **evolve** as the person in the home "**devolves**"—needs more monitoring."

Future Research

- Increase sample size
- Consider a psychometric survey
- Explore concept of trust
- Explore family & caregiver views
- Specific features & functionality
- Human emotion & health-assistive tech
- Cost analysis
- Marketing & gerontechnology literacy
- Implementation & receipt of the smart home
- Personalized smart home health & "Internet of Things" (I.O.T.)