INTRODUCTION
There is a lack of understanding why some older adults discontinue using smart technologies (including conversational agents). This work critically examines the various theories that contributed to developing the Technology Acceptance Model (TAM) and pinpoints shortcomings that might lead to the discontinued use of technologies.

BACKGROUND

Theoretical Motivation
- Theory of Planned Behavior (TPB)[1]
- Technology Acceptance Model (TAM)[2]

Why Older Adults and Conversational Agents?
- Increased need for technologies that support aging in the home [3].
- Older adults are a population that has struggled to adopt and continue using smart devices [4]-[8].
- Conversational agents can promote safety, security, improved emergency response, and independence for older adults [8], [9].

METHOD

Participants:
- 82 participants (38 male, 44 female).
- 45% USA; 39% UK; 6% Other
- Participants were between 65 and 90 (M = 69.37; σ = 4.50).
- Most participants were retired (55.68%).
- Caucasian (95.18%).
- Married (56.09%).
- Had at least a high school diploma/GED (92.78%).
- The median year that the technology was purchased was 2020

Procedure
- This study was approved by the Georgia Tech Institutional Review Board (IRB). Protocol #H23006
- Online survey ~40 minutes.

RESULTS

Theme 1: Perceived Benefits

Subtheme 1: Technology Needs
- Not driven solely by trendiness or fun. Participants provided concrete examples of features that motivated their purchase.

Subtheme 2: General Curiosity
- Purchase based on fun, trendiness, and intrigue.
- Not focused on specific functional features.

Subtheme 3: Emotional Needs
- Combating boredom.
- Reduce loneliness.

Theme 2: Unforeseen Challenges and Disruptions

Subtheme 1: Unmet Expectations
- Unmet expectations lead to anger, frustration, disappointment, dissatisfaction, and disengagement.
- This was often attributed to a lack of sufficient instructions and training.

Subtheme 2: Absence of Relevance
- Loss of interest despite good product functionality.
- User needs or circumstances changed.

Subtheme 3: Perceived Risk
- Privacy/security concerns.
- Distraction in large companies (political bias).

Subtheme 4: Impacts on Autonomy
- Remain independent by not becoming dependent on technology.

DISCUSSION

How can we enhance older adults’ experiences with technology?
- Public education on privacy policies.
- Improvements in accessible design.
- Improved instructional materials/educational design of technologies.
- Develop technologies that foster feelings of autonomy and dignity in the user.

Limitations
- Self-report data can be subject to bias and/or inaccuracies.
- This study only collects data at a single time point and does not capture how technology use changes over time.
- This is a complex topic that is influenced by several additional factors.

WHATS NEXT?
Interventions for Technology Use in Older Adults with MCI

Designing for Older Adults
- Health Belief Model [13]-[15].

Evaluation of Instructional Design Literature
- Problem-solving and Subgoal Learning
  - Effects of Background [16].
  - Examples to improve transfer [17].
  - Guided Explanations [18].
  - Contextual Limitations [19].

Methodological Considerations and Challenges
- Critical analysis of methodologies used in the reviewed studies.
- Identification of gaps in current interventions and areas for future research.
- Discussion on challenges in studying technology use in older adults.

REFERENCES

Scan the QR code for a full list of references

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