Measuring impact of ICTs on Quality of Life of Older Adults

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Introduction

The older adult population in France will grow to over 25% of the total population by 2050, and the majority of older adults want to age in place. Aging in place improves perceived quality of life, maintains access to social support networks and reduces health care complaints and costs in comparison to institutionalization. However there are many reasons that people are unable to stay in their homes, including stress and worry of family members, the older adult becoming unable to perform basic activities of daily living, and the older adults requiring too many services than can be provided by care agencies and family members. Many novel ICTs have been developed to support both the older adults aging in place and their caregivers. It is important to determine the efficacy of such ICTs to know which to invest in and which are not worth the expense. In this project, we have designed an evaluation of current commercial technologies and more novel technologies developed in the Handicom lab to support aging in place. The evaluation measures the older adult's quality of life, caregiver anxiety and burden, and participant acceptance and use of the technologies.

Research Questions

RQ1: Does the technology impact the quality of life of older adults?
- RQ1.1: Does the technology change older adults’ perceptions of quality of life?
- RQ1.2: Does the technology assist older adults in performing (instrumental) activities of daily living they previously had difficulty with?
- RQ1.3: Does the technology change older adults’ relationships and frequency/quality of contact with their friends and family?

RQ2: Does the technology impact informal caregiver burden?
- RQ2.1: Does the technology change the caregivers’ anxiety concerning their loved one?
- RQ2.2: Does the technology change the caregiver’s perceived burden of their caregiving duties?
- RQ2.3: Does the technology impact the amount of time caregivers perform caregiving tasks for older adult?
- RQ2.4: Does the technology change the informal caregiver’s relationship and frequency/quality of contact with their loved one?

RQ3: Do older adults and their caregivers accept the technology?
- RQ3.1: Do older adults and their caregivers use the technology?
- RQ3.2: What are older adults’ and their caregivers’ perceptions of the technology?
- RQ3.3: Under what circumstances do older adults and their caregivers use (or not use) the technology?
- RQ3.4: What factors impact older adult and caregiver acceptance of the technology?

Study Setup
- Control group and intervention group (to be able to show causality)
- 3.5 month study
- Intervention:
  - month 1: commercial technology
  - months 2-3: Handicom technology
- Measures
  - Standardized questionnaire (monthly)
  - Interview questions (bi-weekly)
  - Technology logs (continuous)

Timeline

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Technologies

- RQ1.1: Standard Short Form 36v2 Health Survey
- RQ1.2: Katz ADL scale & Lawton-Brody IADL scale
- RQ2.1: State Anxiety Inventory
- RQ2.2: Zarit Burden Interview
- RQ2.3: Caregiver Activity Survey

Research Design

- Age 60-80
- Living in independent house or apartment
- Excluded if family intends to move elder to institution in next 6 months.
- Early stage dementia (determined by Mini-Mental State Exam)
- 20 participants randomly assigned to control or intervention group