

sum of perceived usefulness, perceived ease of use, and perceived adaptability (Heerink et al., 2010; Xu et al., 2015). The independent variable was the cognitive ability of participants to report on their own. The moderating variable was the age-friendly environment sum of physical, service-side, and cultural conditions. Multiple regression analysis was conducted to determine the relation between cognitive ability and the attitude towards gerontechnology. The moderating effect was then analyzed using PROCESS macro and bootstrapping. Results show that cognitive ability has a positive effect on the attitude towards gerontechnology, and the age-friendly environment has softened its effectiveness. When participants were living in a more age-friendly environment, their attitude toward gerontechnology was less affected by their cognitive ability. However, when age-friendly environmental condition scores above 62 (out of 75), the environmental aspect did not affect the association between cognitive ability and attitudes to gerontechnology. This study suggests that the age-friendly environment can narrow the disparity of the attitude towards gerontechnology depending on the cognitive capability levels under certain conditions. Regarding the attitude towards technology may affect the actual use, the possibility of environmental help is meaningful.

TRUST WITH AUTONOMOUS INTELLIGENCE SYSTEMS TO PROMOTE ADOPTION IN ASSISTIVE TECHNOLOGIES: A LITERATURE REVIEW

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While advancements in machine learning are increasing rapidly, very little progress has been made in its mass adoption despite its benefits in assistive technologies for older adults. By examining how users interact with smart technologies, characteristics of trust can be identified and enhanced to increase adoption of the next generation of assistive systems. The current study conducted a literature review to understand better how trust with autonomous systems is formed and maintained. Twenty-two pertinent articles were identified in which three themes emerged. First, people tend to forgive human errors more than errors made by machines -- meaning mistrust is exaggerated when systems make mistakes. Second, the development of trust depends on how the system solves the tasks it is assigned, for instance if a user does not believe the system acted in an "ethical way," distrust may form and the continuation of adoption is decreased. Lastly, trust depends on the situation and the risk/reward associated with using the system, for example the trust needed to board an autonomous plane differs from that for a simple grammar correction. Taken together, the black box ideology of autonomous systems may be an issue that prevents trust in them to be formed and maintained. Promising future directions are to create machine language translators that improve transparency of autonomous system behaviors (i.e., explainability). Even if assistive technologies are created to aid older adults -- the lack of focus on understanding the factors that foster trust may dampen their actual use.

USING SMART SPEAKERS IN LOW-INCOME SENIOR HOUSING TO ENHANCE THE AGING IN PLACE EXPERIENCE: STAKEHOLDER VIEWS

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Smart speakers provide a platform that can integrate smart home technology and/or safety devices within the home to enhance quality of life and independent living for older adults. However, few attempts to utilize this technology specifically within low-income senior housing (LISH) residents have been documented. Our purpose was to explore different stakeholder perceptions about the use of smart speakers to support aging in place in older adults living alone in LISH. Smart speakers were deployed in individual LISH apartments, equipped with a voice technology-based aging in place solution for the facility. A qualitative analysis of semi-structured interviews using a constant comparative approach for emerging themes was conducted (n=10: older adult users, n=2: housing staff, n=2: voice technology developers). The three participant groups showed diverging perceptions in terms of benefits, uses, and stakeholder interests. Older adults found smart speakers useful in four main areas: assistance with daily tasks, feeling connected, safety measures, and emotional wellbeing. The two other groups showed a broader interest in the use of the smart speaker device, such as residential management tools and communication channels in addition to its potential use as safety and wellness tools. Older adults experienced significant difficulty setting up desired functions or finding instructions, which restricted utilization of the technology to a limited set of tasks. All stakeholder groups addressed a need for formal training or personalized tech support for older adult users. Findings indicate the importance of developing deployment strategies tailored to the needs and characteristics of the target user group.

VOICES OF CAREGIVERS: KEY DEMANDS TOWARDS AI-DRIVEN HOME MONITORING IN COMMUNITY-BASED DEMENTIA CARE

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While most people with dementia prefer to live at home for as long as possible, this also puts more pressure on both their informal and formal care network. To provide support in home-based dementia care, there is growing interest in technology that allows caregivers to remotely monitor health and safety of people with dementia. Novel generations of these technologies are using non-wearable, pervasive sensors coupled with algorithms to continuously collect and model meaningful in-home information. However, while these self-learning monitoring systems develop rapidly, their target users' views and demands are still insufficiently mapped out. To identify possible barriers to acceptance and ways to overcome these, we conducted a scenario-based study, including semi-structured interviews with informal caregivers (n=19)

and focus groups with home care professionals (n=16) of community-dwelling people with dementia. Inductive qualitative content analysis revealed that both groups of caregivers were concerned about the informational privacy of their care recipient with dementia, information overload, and ethical issues related to dehumanizing care. Identified demands mainly centered around how to overcome these barriers. We identified several demands related to specific functionalities, user experience factors, services surrounding the technology, and integration into the existing work context. Most notably, caregivers highlighted the importance of introducing AI-driven in-home monitoring technologies in a way it prevents them from feeling undervalued. In conclusion, our findings can help to inform the development of more acceptable and unobtrusive in-home monitoring technologies to support home-based dementia care.

WHAT FACTORS ARE ASSOCIATED WITH FACILITATING CONDITIONS TO USE GERONTECHNOLOGY?

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The purpose of this study is to explore relevant factors associated with facilitating conditions to use gerontechnology among Korean older adults. The sample was 310 Korean older adults aged 65 and above without cognitive impairment who participated in an online survey. The facilitating conditions to use gerontechnology were measured by the sum of five questions about basic knowledge, available help, financial resources, accessibility, and social influences of using gerontechnology from the Senior Technology Acceptance Model (STAM). Possible relevant factors comprised socio-demographic characteristics, physical and mental health, environmental factors, and social relationships. The results from the linear regression analyses showed that employment status, household income, cognitive function, social activity participation, and support from friends or neighbors were significantly associated with facilitating conditions to use gerontechnology. Older adults who are employed, have higher household income, have better cognitive functions, participate more in social activities, and receive higher levels of support from friends or neighbors tend to be in more facilitating conditions to use gerontechnology. The findings from this study imply the necessity of facilitating conditions to use gerontechnology as social policies for older adults who are unemployed, have lower household income, have worse cognitive functions, and have fewer social resources. This study is meaningful in that it has empirically explored various factors related to facilitating conditions to use gerontechnology for older adults based on the STAM. Future studies are needed to explore significant factors associated with facilitating conditions to use gerontechnology via various contexts.

WHO MATTERS FOR THE SUBJECTIVE PERCEPTIONS TOWARD GERONTECHNOLOGY?

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The present study aims to investigate how personal relationship satisfaction moderate the associations between types of social support providers and the subjective perceptions toward gerontechnology among Korean older adults. Data were collected by an online survey in February 2021. The sample was 256 older Koreans who have a partner and children (N=109 older adults with low personal relationship satisfaction, N=147 older adults with high personal relationship satisfaction, Age: 66-88, M=69.91, SD=4.19). The dependent variables for the subjective perceptions toward gerontechnology were attitude toward using gerontechnology and anxiety for gerontechnology. Independent variables were four types of social support providers (spouse, children, siblings/relatives, and friends/neighbor). Personal relationship satisfaction was a binary moderator, dividing the sample into low and high personal relationship satisfaction groups. We applied multigroup structural equation modeling. The results showed associations between social support providers and subjective perceptions toward gerontechnology differed by the quality of personal relationships. In detail, receiving support from spouses was associated with the lower level of anxiety of using gerontechnology among older adults in the low personal relationship satisfaction group. Moreover, receiving support from spouses was associated with a higher level of attitude toward using gerontechnology in the high personal relationship group. Receiving social support from other providers were not significant in both groups. The findings imply that the partner living with was salience for positive perception toward gerontechnology. Furthermore, support from spouses may differently work on the subjective perception toward gerontechnology by the quality of personal relationships.

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Biology of Aging

AGE-RELATED PHENOTYPES LINKED TO ABERRANT EXPRESSION AND LOCALIZATION OF A TELOMERIC PROTEIN

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Telomere attrition is associated with telomere biology disorders and age-related diseases. In telomere biology disorders, telomere uncapping induces a DNA damage response that evokes cell death or senescence. However, a causal mechanism for telomere attrition in age-related diseases remains elusive. Telomere capping and integrity are maintained by shelterin, a six-protein complex. Rap1 is the only shelterin member that is not required for telomere capping and is expressed at non-telomeric genomic and cytosolic regions. The objective of this study was to determine aberrant phenotypes