

Perceived Authenticity and Human-Likeness in Social Chatbots: Key Predictors of Older Adults' Adoption

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Abstract

Although growing evidence indicates that older adults have increasingly engaged with social chatbots for companionship, the factors shaping their adoption decisions remain poorly understood. This study developed an age-friendly social chatbot and investigated older adults' intention to use it by integrating the Senior Technology Acceptance Model (STAM) with socio-relational factors relevant to human-AI interaction.

A total of 143 community-dwelling older adults participated in the study, with three excluded for not meeting inclusion criteria. Participants interacted with the chatbot for approximately 20 minutes and subsequently completed questionnaires assessing their attitudes toward the chatbot, perceptions of its characteristics, and intention to use it in daily life.

Among STAM factors, control belief (e.g., perceived ease of use and facilitating conditions) positively predicted intention to use the chatbot, whereas self-rated health showed a negative association. Socio-relational factors, including perceived authenticity and AI social interaction intensity, also positively predicted intention to use. In contrast, anthropomorphism was negatively associated with intention. Adding socio-relational factors to the STAM framework explained a comparable additional proportion of variance beyond STAM alone.

These findings highlight control belief, authenticity, and social interaction intensity as key drivers of adoption, while suggesting that overly human-like features may deter use. Integrating human-AI interaction factors with STAM is essential for understanding older adults' adoption of social chatbots.

Keywords

Conversational agent, virtual companionship, human-like, control belief, age-friendly.