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Poster

# The Effect of Information and Communication Technologies Utilization Patterns on Self-Rated Health

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## Abstract

**Background:** An increasing number of older adults are using information and communication technologies (ICTs), and ICTs have become a major resource for older adults for improving health-related quality of life. ICTs possibly help older adults seek health information online, collaborate with other users in their decision making process, and receive social support. Although there have been some studies highlighting positive associations between ICT utilization and health, there is still limited knowledge about various patterns of ICT utilization among older adults.

**Objective:** This study aims to extend the empirical evidence regarding the patterns of older adults' ICT utilization, investigate different attributes across various ICT utilization patterns, and further examine how these patterns influence self-rated health.

**Methods:** Data came from the 2012 and 2014 Health and Retirement Study, a nationally representative sample of Americans aged 51 and older. Our sample was restricted to individuals who responded to a special survey about technology use asked only to a subsample of 2012 interviews (N=1504). Latent class analysis was used to identify ICT utilization patterns based on ICT utilization variables: (1) communication-related utilization, including use of email, social networking sites, online video call, instant messenger, and smartphones; (2) finance-related utilization, such as online bill payment and online banking; (3) health-related utilization, including exercise equipment, exercise videos, online wellness programs, online health information, health monitoring devices, and Wii Fit; and (4) entertainment-related utilization, including e-readers/tablets, mp3 players, online streaming media, and video game. Ordinary least squares regressions were used to examine the effects of ICT utilization patterns on self-rated health at follow-up as compared to baseline.

**Results:** Four ICT utilization patterns were identified: multifarious (n=90: high level of ICT utilization across most variables), e-commerce-oriented (n=147: high level of finance-related utilization), fundamental (n=280: email and online search focused utilization), and minimal users (n=552: low level of ICT utilization across most variables). We found that multifarious users were younger, more often female, married, and had higher education and income levels and better physical and mental health than other groups. Minimal users were more likely to be older, non-white, and single, and more likely to have lower level of education and income and poor physical and mental health. Regression models showed multifarious users were most likely to have better self-rated health, and minimal users tended to have the worst self-rated health over time, even after controlling for sociodemographic attributes and health conditions. E-commerce-oriented users were more likely to have better self-rated health than fundamental users.

**Conclusions:** This study identified clearly different ICT utilization patterns among older adults and demonstrated positive effects of ICT utilization on health among older adults. Improving access to ICTs and ICT education programs will help to improve health outcomes of older adults, but the effects of different ICT utilization patterns need to be highlighted in future studies.

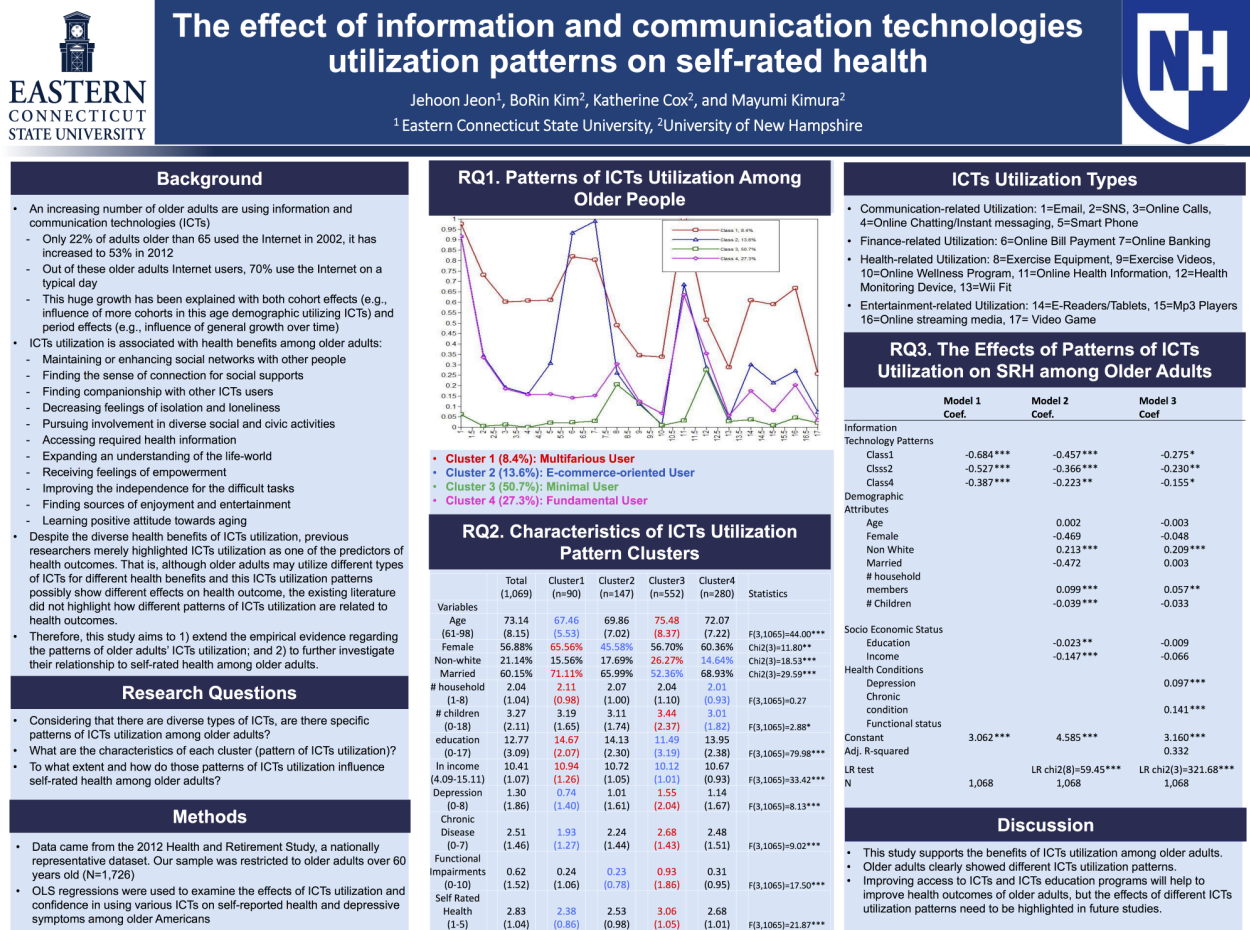
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KEYWORDS

information and communication technologies; self-rated health; older adults

This poster was presented at the Connected Health Symposium 2016, October 20-21, Boston, MA, United States. The poster is displayed as an image in [Figure 1](#) and as a PDF in [Multimedia Appendix 1](#).

Figure 1. Poster.



Multimedia Appendix 1

Poster.

[\[PDF File \(Adobe PDF File\), 912KB-Multimedia Appendix 1\]](#)

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