

# PAPER

## Social Robotics

E. BOEVERS, G. MCCALL, E. HARRINGTON, H. DO, A.J. BISHOP, W. SHENG. *Exploring older adult concerns regarding acceptance and use of social companion robots. Gerontechnology 2018;17(Suppl):120s; <https://doi.org/10.4017/gt.2018.17.s.116.00>*

**Purpose** The evolution of various companion robots has generated empirical interest into understanding the extent to which older adults will accept and adopt such technology as assistive social agents in eldercare<sup>1</sup>. Although older adults are generally open to robot assistance in performing instrumental home-based tasks, they remain highly selective relative to allowing a social robot perform more intimate and private functions<sup>2</sup>. In fact, older adults are more inclined to accept and use a social companion robot if such technology is practical and easy-to-use, enhances feelings of personal safety, and serves as a source for acquiring new information relative to the weather, news, or pursuit of personal interest.<sup>3</sup> However, there is still limited knowledge regarding whether older adults might accept social robots relative to design, monitoring of human emotion and behavior, provision of care assistance, or technological support and maintenance.

**Method** A total of N = 31 older adults were examined in (n = 13 men, 18 women; mean age: 75.96, SD = 6.87) were conveniently sampled to complete a self-administered survey. The purpose of this survey was to exam perceived opinions regarding acceptance and use of social companion robots.

**Results & Discussion** Four areas emerged as problematic relative to older adult acceptance and use of a social companion robot. First, a majority of participants indicated concern with the potential for hackers to take control of the social robot (74.2% versus 25.8%). Second, most participants indicated safety and security of private and personal information as concerning (77.4% versus 22.6%). Third, a majority of participants viewed cost for repair and maintenance as a concern (67.7% versus 32.3%). Fourth, older participants were concerned with the extent of technological support that would be needed to operate the social robotic device (64.5% versus 35.5%). Interestingly, an overwhelming majority of participants indicated low concern relative to the size, color, or appearance of the social robot (90.3% versus 9.7%). Furthermore, a majority of participants viewed social robotic ability to detect and record vocal sound or communication as non-problematic (67.7% versus 32.3%). Results indicate that safety and security of the robotic device, personal privacy, financial cost, and technological support represent barriers relative to the acceptance and use of a social companion robot by older adults. Yet, design quality, as well as vocal and oral monitoring capabilities of the social robot are more accepted by older adults. Gender differences in the acceptance and use of a social robot companion will be further highlighted.

### References

1. Heerink M, Kröse B, Evers V, Wielinga B. *International Journal of Social Robotics* 2010;2(4):361-375
2. Smarr CA, Prakash A, Beer JM, Mitzner TL, Kemp CC, Rogers WA. *Proceedings of the Human Factors and Ergonomics Society 56th Annual Meeting* 2012;153-157
3. Young J, Hawkins R, Shalin E, Igarashi T. *International Journal of Social Robotics* 2009;1(1): 95-108

**Keywords:** social robot, older adults, acceptance, barriers  
**Address:** Oklahoma State University, Stillwater, OK USA;  
**E:** hboever@ostatemail.okstate.edu

