## **ROUNDTABLE: OTHERS**

Gerontechnology for low- and middle income countries: Experiences lessons and challenges

C. Mathews, N. Charness, P. Chakraborty, P. Costa Castro, N. Thi Phuong Lien, J. Garcia-Alonso, A. Timlin, H. S. M. Kort

Purpose The HelpAge global network and the International Society for Gerontechnology (ISG) are exploring opportunities for collaboration. On the one hand, ISG members may share learning from ageing and gerontechnology explorations, design, innovations, and interventions while members of the HelpAge global network share their views and experiences on what technological innovations can be introduced into Low- and Middle-Income countries (LMICs) and how to make these more accessible and affordable in low-resource settings and enhance older people's participation in its design. Method In April 2024, HelpAge invited a sample of its Network Members to respond to a short online survey to capture their experiences, lessons, and challenges in using Gerontechnology in their work with older people in LMICs. Eight organizations from 7 countries responded, all of whom are happy to continue engaging on this topic (see Table 1). The survey comprises three questions: experience with technology (Q1), challenges to adapting technologies for older people (Q2), and views on key gaps in the availability and suitability of technologies for ageing populations (Q3). In addition, on May 15, 2024, a webinar was hosted by the HelpAge Global network together with ISG to have more in-depth discussions and explore potential benefits. Results and Discussion Results related to Q1 are: that there are significant opportunities for the use of technology for ageing people. There are mobile apps to promote self-management and well-being by monitoring health data and offering services and resources. Also, digital literacy programs can be used to empower older people to engage with technology confidently through training, basic smartphone usage, and more. Technological innovations for older people offer exciting possibilities for a more independent and fulfilling life when ageing. Findings regarding Q2 are: user-related challenges are reported including physical limitations (reduced dexterity, vision impairments), cognitive challenges (memory issues), lack of habit in using technology, and information overload. Technological solutions do use smartphones as an interface which requires digital skills and access to the internet and data storage. The former can be lacking or low while the latter could be absent or not affordable in LMICs. Key gaps coming from Q3 are that technology products are often designed without sufficient attention to expected age-related declines in dexterity or vision, hindering user interaction. Many technologies have complex interfaces and technical terminology which pose challenges for users with varying levels of technological literacy. In addition, there is a need to provide personalization and tailoring of technological innovations to better fit older people's capabilities (Castro et.al., 2020). There is also a need to consider cultural nuances and linguistic preferences. Technological innovations usually cater to higher socioeconomic classes and neglect older people with limited resources. The work of Jesús-Azabal et. al. 2023 also presented at the webinar though showed that it is possible to design technological solutions for older people with limited resources and access to the Internet. Charness showed that it pays off to include older people from the start of the design of technological innovation (Charness, et.al., 2022) while Costa-Castro presented that a commercial party in Brazil targets the needs of older people providing tailored services in health diagnostics at home. In Gerontechnology students are educated to design user-friendly, easy-to-use, robust technological solutions for older people. Mainstream industry though is not familiar yet with gerontechnology. In this roundtable, further collaboration will be explored as well as a discussion of how to reach mainstream industry designing technologies for older people.

## References

Gerontechnology; HelpAge Network Member experiences, survey summary, June 2024

Castro, P. C., Romano, L. B., Frohlich, D., Lorenzi, L. J., Campos, L. B., Paixão, A., ... & Angélica de Oliveira Gomes, G. (2020). Tailoring digital apps to support active ageing in a low income community. *Plos One, 15*(12), e0242192. https://doi.org/10.1371/journal.pone.0242192

Jesus-Azabal, M., Berrocal, J., Soares, V. N., García-Alonso, J., & Galán-Jiménez, J. (2023). A self-sustainable opportunistic solution for emergency detection in ageing people living in rural areas. *Wireless Networks, 29*(5), 2353-2370. https://doi.org/10.1007/s11276-023-03294-9

Charness, N., & Boot, W. R. (2022). A Grand Challenge for Psychology: Reducing the Age-Related Digital Divide. *Current Directions in Psychological Science*, 31(2) 187–193. https://doi.org/10.1177/0963721421106814444

Keywords: older people; rural areas; limited resources; learning communities

Affiliation: Utrecht University of Applied Sciences, Technology for Healthcare Innovations, The Netherlands

Email: helianthe.kort@hu.nl; ORCID iD: H.S.M. Kort (0000-0001-9735-1015)

Acknowledgment: All participants of the survey and those attending the webinar are thanked for their valuable contributions.

Table 1. Overview of the countries and organizations participating in the HelpAge Global Network Survey

Country	Organisation
Argentina	LeDor VaDor Foundation
Brazil	Federal University of Santa Catarina (UFSC)
Brazil	Paulista School of Medicine, Federal University of São Paulo (UNIFESP)
Costa Rica	The Costa Rican Gerontological Association (AGECO)
India	HelpAge India
Moldova	HelpAge Moldova
Thailand	Foundation for Older Persons' Development
Vietnam	HelpAge International