

# AB002. Perspectives of Japanese elders and their healthcare providers on use of wearable technology to monitor their health at home: a qualitative exploration

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**Background:** With 24 million Japanese elderly aging at home, the challenges of managing chronic conditions are significant. As many of Japan's elders manage multiple chronic conditions, investigating the usefulness of wearable health devices for this population is warranted. The purpose of this qualitative study was to explore the perspectives of Japanese elders, their caretakers, and their healthcare providers on the use of technology and wearable devices to monitor health conditions and keep Japanese elders safe at home.

**Methods:** To optimize our understanding of perspectives of Japanese elderly living in their homes on the use of wearable technology to monitor their health, a community-based participatory research methodology was conducted, where perspectives of a community advisory board were first assessed, followed by perspectives of elderly Japanese, their caregivers, and healthcare professionals. The Consolidated Criteria for Reporting Qualitative Research (COREQ) were used to ensure a consistent process throughout the

study. In conducting this study, a community advisory board was first established to guide the focus group methodology, wherein six focus groups and two one-on-one interviews were conducted, with a total of 21 participants.

**Results:** Four major themes emerged from the analysis: (I) health characteristics of the elderly and challenges in being monitored accurately; (II) current use of monitoring technology and curiosity about use of the latest digital technology to keep elderly healthy at home; (III) perceived advantages of wearing sensor technology; and (IV) perceived disadvantages of wearing technology. Many of the elderly participants were interested in using monitoring devices at home, particularly if not complicated. Healthcare workers found monitoring technologies particularly useful during the isolation of the coronavirus disease 2019 (COVID-19) pandemic. Elderly participants felt cost and technical issues could be barriers to using monitoring devices.

**Conclusions:** Engaging the community of elders themselves and their caregivers and providers optimizes future intervention efforts focused on eliminating gaps in healthcare delivery for Japanese elderly who are most in need of care. While there are challenges to utilizing monitoring devices, the potential to aid the aging population of Japan justifies further investigation into the effectiveness of these devices.

**Keywords:** Japanese elders; sensor technology; healthcare workers

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## Footnote

*Conflicts of Interest:* All authors have completed the ICMJE uniform disclosure form (available at <https://jphpe.amegroups.com/article/view/10.21037/jphe-2023-apru-ab002/coif>). All authors report funding for participant reimbursement from Sue & Bill Gross School of Nursing, University of California Irvine, and School of Nursing, Kitasato University. The authors have no other conflicts of interest to declare.

*Ethical Statement:* The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved. The study was conducted in accordance with the Declaration of Helsinki (as revised in 2013). The study was reviewed and approved by the Institutional Human Subjects Review Board of the University of California Irvine (No. 1206) and Kitasato University (No. 2022-6-2). Informed consent was obtained from all individual participants.

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