Engaging Older Adults in Technology Research: Exploring Opportunities for Flourishing

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Background

Meaningful collaboration yields valuable results [1].

Rapid advancements in technology have propelled older adults into a new digital era. Apps, wearables, robots, and artificially intelligent (AI) devices now support older adults to live well. Creating assistive technologies requires a rich understanding of enduser needs, values, and preferences. In technology research, engaging with older adults generates knowledge to produce solutions that are ethically aligned, relevant, and responsive to priorities [2].

Partnered engagement is gaining positive momentum and transforming how we conduct research, but there is much to still to learn [3].

Problem

The value of engagement is not universally acknowledged.

Despite the many positive biopsychosocial impacts of activity being well recognized, and the increasing availability of engagement strategies, older adults continue to face ageism and are limited from participating in innovative research [4,5].

Stigmatizing exclusion criteria include upper age limits, unfamiliarity with technology, cognitive decline, and other physical or psychological reasons [5].

Little is known about the impact of engagement beyond research outcomes. The phenomenology of partnering in research calls for exploration. Might engagement promote opportunities for human

[6] Bostrom & Heinen (1977)

[1] CIHR (2014) [2] Robillard & Kabacińska (2020) [3] PCORI (2024)

flourishing? [4] Fardeau et al (2023) [5] Mannheim et al (2022)

[7] WFOT (2024) [8] VanderWeele (2017) [9] Illes (2023)

Argumentation

Members of an older adult advisory group, The League, describe their experiences of engaging in technology research.

Themes from anonymous surveys and 1:1 interviews:

means discovering your potential and being lucky enough to be able to express

it." League member 2 66 Profoundly

> exciting." League member 1

I'm not looking for it to satisfy personal objectives. It helps in a mosaic kind of Way." League member 2

the sense of

can make me

potential

flourish."

League member 3

Purposeful Urgency to contribute to tech research Altruistic Respected Giving back; looking Feeling heard; included; outward at impact of contributions valued tech on society and useful Inspired Connected Motivated by tech Self and others; shared innovations understanding Personhood Roles and identity

Diverse perspectives enhance understanding:

- Sociotechnical theory views human and technical elements as integral parts of interconnected systems, facilitating interdisciplinary, human-centric enquiry [6].
- Occupational Science declares engaging in meaningful activity as a human right [7]. Justice and equality are important ethical considerations for partnered engagement.
- Flourishing is multidimensional. Rooted in philosophy, theology, and positive psychology, flourishing describes realization of human potential across domains of life, enabled by individual and contextual factors. For many, domains of flourishing encompass happiness and life satisfaction, mental and physical health, meaning and purpose, character and virtue, close social relationships, material stability [8].

High Cross-cultura Synthetic resolution perspectives biology multimoda holism, Neurostim: imaging personhood complex Environmental Companion mental health robots neuroethics disorders Advanced International organoids legal systems Web-based Human Open mental healt flourishing science counselling telehealth Resources Devices and social Biomaterials justice

Mosaic of Neuroethics

Colored tiles show relevance of this study to contemporary neuroethics. The interconnected mosaic goes beyond the original pillars of neuroethics (Brain Science and the Self; Brain and Social Policy; Ethics and the Practice of Brain Science; Brain and Public Discourse and Training) to depict prominent areas of enquiry for today's neuroethicists [9].

Conclusions

dynamic and personal experience.

Engagement has research and person-centered benefits. Unique perspectives shape how technology is designed and adopted by end users. Critical examination of engagement, under the lens of human flourishing, reveals that engagement is a complex,

Narrative accounts reveal proximal benefits for older adults. Impacts of engagement span life domains that are in symbiosis with health, wellbeing and human flourishing. Older adults value opportunities to contribute to innovative research that may broadly impact society. Technology is a vehicle for shared understanding and bolsters a sense of urgency that motivates participation in research.

Engaging in research is a meaningful and purposeful activity. Human rights and ethics are important considerations of partnered engagement.

Importance

This study adds fresh perspectives to the phenomena of engagement in research, revealing important ethical implications that may inform how we approach partnered engagement.

Further research from multidisciplinary perspectives will enhance knowledge of engagement and strengthen the field of translational neuroethics by stimulating inclusive, integrated and socially just research practices.

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