Co-developing a sustainable, meaningful, digital, platform to enhance active ageing with community dwelling older adults (>75 years)

Lisa Henglien-Chen[1], Elysa Ioannou[2], Khalid Ali[3], Ekow Mensah[3], Avanka Fernando[1], Kerry Stack[4], Shirley Hall[4], Sam Fosker[5], Sally Fowler-Davis[2]

1 School of Education and Social Work, University of Sussex
2 Sheffield Hallam University
3 Brighton and Sussex Medical School, University of Sussex
4. ExtraCare Charitabel Trust
5 Cust Health Solutions

Introduction

Limited mobility in old age results in social isolation, loneliness, accelerated frailty, dependency, depression, and institutionalization. Most mobility interventions did not capitalize on the spirit of peer support in supported-living communities.

Wearable devices can enhance physical activity by increasing motivation and participation of older adults (1). However, older people differ in how, where and when they prefer to engage with wearable devices (2). The adoption of this novel technology has so far been for the few. The main objective of this study is to co-design a set of digital measures and principles around mobility in a supported-living community of older people >70 years.

Methods

Our project focused on normalisation, adaptation, and enablement of older people through routine, daily activities and social participation within a model that mirrors the WHO Age-friendly environment (Figure 1).

We interviewed a group of older people aged 75 and above in two retirement villages run by ExtraCare Charitable Trust, a charity providing homes, enjoyable lifestyles, and care when needed in 3,900 homes across the UK (https://www.extracare.org.uk/)

Our digital technology partner is Cush Health Solution, a company that offers wearable technology and a tele-health platform to record and monitor physical activity (https://cushhealth.com/)

Individual interviews were transcribed, followed by thematic analysis to identify different personality traits in relation to mobility. One focus group interview was conducted in each village to explore residents' opinions about capturing physical activity in a digital platform from Cush.

Study funded by UKRI/ Zinc Catalyst Healthy Ageing Initiative.

Discussion

Cush Health previous field work in UK, France, Belgium & the Netherlands since 2020 has identified older people priorities in relation to mobility and digital platforms.

In the Hospital to Home (H2H) study, Cush used Fitbit Charge4, and their app with 66 post-hip fracture patients, average age 75 years. Using the digital app resulted in shorter hospital stay (10 vs 12, p=0.05), median step count increased from 477 in hospital, to 931 at week 1 post-discharge, to 5352 at 12 weeks (p=0.001) compared to the control population who received usual care.

Our group aims to co-develop further an individualised mobility program using Cush application, and test its clinical and cost effectiveness on safety, independence & quality of life in a larger cohort of older people working with ExtraCare Charitable Trust, St Saviour's Charity, and Hallmark Foundation in London, Kent, Surrey, Sussex, and the Midlands.

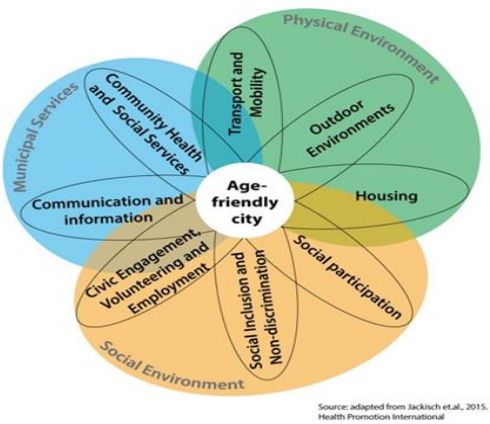

Figure 1: Theoretical framework for WHO age-friendly environment

Results

Our team met 20 adults, average age 83 years, resident in New Oscott village in Birmingham, and Brunswick village in Sheffield. Nine participants were females and 17 already had access to devices. Eight participants had arthritis, past physical injuries, or surgery that had affected their mobility.

Thematic analysis of 1-1 interviews identified three personas of older adults in relation to mobility: 'out and abouter', 'exerciser', and 'loner'.

Participants preferred traditional forms of technology. Newer technology was acceptable if it had purpose, practical, easy to use, tailored to need, fun, and included a social dimension. Participants gave feedback on how Cush platform can capture their individual mobility needs.

References

1.Brickwood K, Watson G, O'Brien J, et al 2019. Consumer-Based Wearable Activity Trackers Increase Physical Activity Participation: Systematic Review and Meta-Analysis. JMIR Mhealth Uhealth; 7 (4): e11819. doi: 10.2196/11819.

2.Kononova A, Li L, Kamp K, et al 2019. The Use of Wearable Activity Trackers Among Older Adults: Focus Group Study of Tracker Perceptions, Motivators, and Barriers in the Maintenance Stage of Behavior Change. JMIR Mhealth Uhealth; 7(4):e9832. doi: 10.2196/mhealth.9832.