Co-design of an Interactive Wellness Park: Exploring Design Requirements for a Multimodal Outdoor Physical Web Installation with older adults

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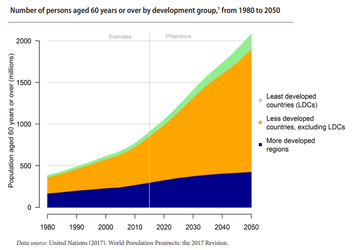
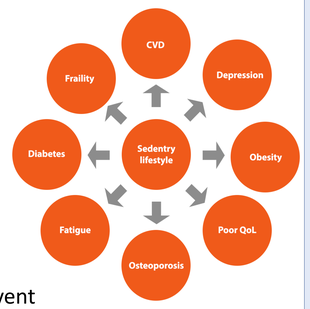
Background

Globally, experts predict that one in six people will be over 60 by 2030, and by 2050, the population aged 60 or over will rise to over 2000 million [1].



Physical inactivity has emerged as one of the prominent risk factors for obesity, overweight, chronic conditions, and non-communicable diseases in older adults [2].



There are well-established benefits of older adults being physically active [12]. Many studies show that regular physical activities effectively reduce and prevent most diseases associated with a sedentary lifestyle among older adults [3].

To encourage older persons to perform physical activities, we proposed creating interactive and accessible outdoor physical activities using inexpensive mobile technology that could motivate older adults to engage in physical activities outdoors [4]. The importance for older adults to experience independence in 'natural' public space is significant, and neighbourhood environments that encourage outdoor activity like walking improve older people's quality of life [5,6].

Aim

To explore the perceptions and experiences of older adults in relation to their physical activity routines and to ideate some initial design ideas for the proposed physical web interface.

Participants

Twenty-one older adults from an older adult organisation around Dublin will be recruited for the study. The participants will be divided into three groups of 7 for the co-design workshop that will take place in Grangegorman Campus. Inclusion criteria are people over 60 who can provide informed consent.

Method

The **co-design** workshop will use the **design thinking** methodology to gather enough resources to develop an interactive prototype (7). A mixed methods approach will be used to gather data during the workshop.

Demographic Questionnaire: These will be used to gather social-demographic information from the participants.
Open-ended questions: These will be used to encourage participants to share their experience of engaging in outdoor activities in small focus groups.
Quantitative Measures: Using RAPA and MDPQ for descriptive analysis of the participants to measure their physical activity intensity (8) and mobile device proficiency (9).

Co-design Workshop

Activities will be tailored toward eliciting participants, perceptions, stories, and experiences of their engagement in activities outdoors.

The Codesign Themes

- What are the benefits of engaging in physical activities outdoors?
- What are the challenges and obstacles/barriers that prevent you from engaging in outdoor physical exercise?
- How might we solve these problems with technology?
- What activities would you do outdoors?

Through the above questions, we hope to understand the optimal processes, technologies, and interactions needed to develop a physical web application in a public open space for rehabilitation and physical activities for older adults

Result

All the artefacts will be analysed using thematic analysis (10). The audio recordings will be transcribed, and inductive thematic analysis will be conducted on the data using NVivo software(11). The themes that arise from this co-design workshop will help design the users' empathy map and inform the next co-design workshop.

Conclusion

The co-design ideation workshop will generate ideas and promote a non-hierarchical atmosphere for older adults and other stakeholders, in which their concepts, lived experience, and tacit knowledge can be applied towards designing an inclusive outdoor physical web interface that supports and motivates outdoor physical activity among older adults.

Future Work

Future workshops will include the design thinking process where the participants will test the proposed physical web solution prototype. The data generated from each of these workshops will greatly influence the final design of the application.

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