

A municipality-implemented behavioural intervention to improve quality of life among older adults: A pilot study protocol

KIRAN M. GERHARDSSON, CHRISTINA BROGÅRDH, ÅSA B TORNBERG, STEVEN M SCHMIDT Lund University, Sweden

Highlights

- We will use a case study approach to explore the implementation of a health-promoting behavioural intervention in municipalities to improve the quality of life among older adults.
- We will evaluate the intervention's usability, acceptance and effectiveness, including follow-ups of intended health-related outcomes at 3 and 10 months.
- The pilot will enable us to trial the case study approach, and lessons learnt will help improve the design of a future full-scale case study.

Introduction

- Having the appropriate electric lighting, exposure to daylight, opportunities for physical activity and good sleep are inter-related.
- But health-promoting strategies directed at older adults have so far never targeted both behaviour and the environment, nor multiple factors (physical activity outdoors and sleep routines).
- A web-based behavioural intervention to support changes to routines and the home was developed to address this need.
- The objective of this longitudinal

pilot study (2024–2026) is to evaluate the intervention's usability, acceptance and effectiveness.

- Proposition: The intervention could lead to the desired changes and be sustained over time, assuming the intervention participants *have the capability* (i.e., have the physical and cognitive capacity), *are motivated* (i.e., find the intervention to be enjoyable and relevant to their needs), and *have the opportunity* (i.e., a supportive learning environment and the technical infrastructure, a walk-friendly outdoor environment).

Methods and materials

- A case study design because the municipality-implemented intervention (the case) heavily depends on the specific setting (the context), e.g., the urban outdoor environment.
- Multiple kinds of data from 1) individuals participating in the intervention and 2) employees in the municipal health care service participating in focus groups.

Context (physical and social urban outdoor area during daytime, senior citizen meeting points in four municipalities and the technical infrastructure in the home)

Case (a municipality implemented behavioural change intervention)

Subunit of analysis (meso): 'service provider' (municipal health care service)

Subunit of analysis (micro): intervention participants (≥ 70 yrs)

Expected results

- If the intended outcomes are met and implementation procedures are viable, adults' continued healthy independent living and improve their quality of life.

1. HOW usable, acceptable and effective is a behavioural change intervention targeting light, outdoor walking and sleep, and HOW can it potentially improve quality of life?

Recruitment: intervention participants (≥ 70 yrs) in 4 municipalities with the help of their health care service (N = 40)

Pre-test (T1): questionnaires, accelerometry for seven days, observation and interview at home (N = 40)

Intervention: 9 week web-based course, including 2 in-person meetings at the senior citizen meeting point (N = 40)

4. WHAT outdoor characteristics are perceived as enablers or inhibitors to daytime outdoor walking, and HOW might future urban design decisions build on such experiences?

Focus group #2: staff from the urban planning office in 4 municipalities to discuss a walk-friendly urban environment (N = 4)

Post-test (T1): questionnaires, accelerometry for 7 days, observation and interview at home (N = 40)

3. WHY do some older adults continue or discontinue walking regularly outdoors?

3 months (T3): observation of each participant taking a walk, video-elicited interview asking about the choice of route, questionnaires, accelerometry for 7 days (N = 40)

Focus group #1: staff from the health care services in 4 municipalities to discuss acceptance and implementation (N = 4)

2. HOW can service structures already present be used to implement a web-based behavioural change intervention effectively?

10 months (T4): questionnaires, accelerometry for 7 days and a phone interview asking about continued routines (N = 40)

Workshop: staff from the health care services in 4 municipalities to report preliminary study results and discuss future implementation

↑ Figure. Project workflow and research questions

↔ Figure. A single-case design with embedded subunits of analysis (Yin, 2009)

↓ Figure. Screenshots of course content on the digital learning platform

Reference: Yin, R. K. (2009). *Case Study Research: Design and Methods*. Sage Publications.

