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Bevæg Byen (Move the Neighbourhood): a community-based participatory built environment intervention study in a Danish deprived neighbourhood to promote active living

Submission date	**Recruitment status**	[_] Prospectively registered
13/12/2016	No longer recruiting	[X] Protocol
Registration date	**Overall study status**	[_] Statistical analysis plan
16/12/2016	Completed	[_] Results
Last Edited	**Condition category**	[_] Individual participant data
14/11/2022	Other	[_] Record updated in last year

Plain English summary of protocol

Background and study aims

There is an increased focus on health promotion strategies in elderly people, as 83% of 60+ year olds do not meet the recommended 150 minutes of weekly moderate physical activity (exercise), and spend 60% of their waking hours sedentary (inactive). Physical activity lowers the risk of cardiovascular (heart) diseases, whereas sedentary behavior is associated with a higher risk of cardiovascular diseases. Recent studies have found that built environmental features influence physical activity in elderly people. The aim of this study is to investigate the association between movement patterns, sedentary behavior, non-sedentary behavior, and the built environment of elderly people in an urban neighborhood of Copenhagen. It is thought that introducing built environmental features into the local community in collaboration with the elderly, will promote outdoor activity and decrease the time they spend sedentary. Built environmental features and /or urban installations could include petanque (boules) lanes, benches along a path in the neighbourhood, lighting, or vegetable gardens.

Who can participate?

Elderly people (aged 60+) in an urban neighborhood of Copenhagen

What does the study involve?

Participants complete a questionnaire and wear a skin-taped accelerometer on their thigh and lower back, as well as a portable GPS device around their neck, for seven consecutive days, to measure their physical activity behaviour and movement patterns. After 6 months the participants are invited to take part in three workshops along with other interested senior residents, scheduled to take place every two-three weeks over a period of six-eight weeks during March-April 2017. Participants are involved in deciding what to build in their local neighborhood. Given the potentially low physical abilities of the senior residents the urban installations are installed by professionals, but the senior residents are invited to participate in

the construction based on their individual interests and capabilities. After 2 years the participants wear the accelerometer and portable GPS device again for seven consecutive days to measure their physical activity behaviour and movement patterns

What are the possible benefits and risks of participating?
Participants benefit from being involved in deciding what to build in their local neighborhood, which may give them community ownership and a feeling of being important. There are no risks of participating. Professionals are in charge of building the new urban installations, so the participants are not physically burdened in any way.

Where is the study run from?
University of Southern Denmark (Denmark)

When is the study starting and how long is it expected to run for?
January 2016 to December 2022

Who is funding the study?
Velux Foundation (Denmark)

Who is the main contact?
Charlotte Pawlowski
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Contact information

Type(s)
Scientific

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Additional identifiers

EudraCT/CTIS number

IRAS number

ClinicalTrials.gov number

Secondary identifying numbers
N/A

Study information

Scientific Title
Bevæg Byen (Move the Neighbourhood): a community-based participatory built environment intervention study in a Danish deprived neighbourhood to promote active living

Study objectives
The objective of this study is to collect research based knowledge on how to alter the public open space in a deprived neighbourhood in Copenhagen to promote active living among people living there.

The study hypothesizes that an intervention introducing built environmental features in the local community in collaboration with the elderly, will promote outdoor activity and decrease time spent sedentary.

Ethics approval required
Old ethics approval format

Ethics approval(s)
The study and its data-management procedures have been approved by the Danish Data Protection Agency (ref: 2015-57-0008). Formal ethical approval for scientific studies in Denmark can only be sought for studies that collect biological material (e.g. blood samples) or treat patients. As neither is done in this study, the ethics of the project could not be evaluated. Danish Universities are not permitted by Danish Law to have their own ethical approval boards, so unfortunately, there is no possibility to have the ethics in this study evaluated externally.

Study design
Quasi-experimental intervention study

Primary study design
Interventional

Secondary study design
Non randomised study

Study setting(s)
Community

Study type(s)
Prevention

Participant information sheet
Not available in web format, please use contact details to request a participant information sheet

Health condition(s) or problem(s) studied
Physical activity behavior and sedentary behavior

Interventions
The study will build on the principles of community-based participatory research and use a co-design approach to develop highly tailored interventions in the form of urban installations. Built environmental features and/or urban installations to increase physical activity and/or decrease sedentary behavior among seniors could be petanque lanes, benches along a path in the neighbourhood, lighting, vegetable gardens, etc. The intervention will be developed, designed and implemented in collaboration with local seniors, using different co-design tools and methods.

Participants will at baseline fill out a questionnaire and wear a skin-taped accelerometer on their thigh and lower back, as well as a portable GPS device around their neck, for seven consecutive days. 6 months after baseline, all participants will be invited to take part in the following design and development workshops along with other interested senior residents. This approach makes it possible to create a co-design process that provides a tailored perspective targeting the specific physical and social context. The development process will consist of three scheduled to take place every two-three weeks spanning over a period of six-eight weeks during March-April 2017. Different co-design tools and methods from design practice will be used to bring together insights and ideation in an iterative design process. Given the potentially low physical abilities of the senior residents the implementation of the urban installations will be carried out by professionals, but the senior residents will be invited to participate in the construction based on their individual interests and capabilities.

Intervention Type
Behavioural

Primary outcome measure
Time spent in different intervention locations in moderate to vigorous intensity physical activity, measured by accelerometer and GPS for seven consecutive days at baseline and 2 years after

Secondary outcome measures
Time spent sedentary in different intervention locations, measured by accelerometer and GPS for seven consecutive days at baseline and 2 years after

Overall study start date
01/01/2016

Completion date
31/12/2022

Eligibility

Key inclusion criteria
1. >60 years old
2. Mentally functioning
3. Live in the neighborhood

Participant type(s)
Healthy volunteer

Age group

Senior

Sex
Both

Target number of participants
35

Key exclusion criteria
1. <60 years old
2. Mental disorders

Date of first enrolment
01/09/2016

Date of final enrolment
31/10/2016

Locations

Countries of recruitment
Denmark

Study participating centre
Sydhavn
Copenhagen
Denmark
2450

Sponsor information

Organisation
University of Southern Denmark

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Sponsor type
University/education

ROR
https://ror.org/03yrrjy16

Funder(s)

Funder type
Other

Funder Name
Velux Fonden

Alternative Name(s)
Velux Foundations, The Velux Foundations

Funding Body Type
Private sector organisation

Funding Body Subtype
Trusts, charities, foundations (both public and private)

Location
Denmark

Results and Publications

Publication and dissemination plan
The following papers will be disseminated through scientific peer-reviewed journals. The results will furthermore be disseminated through lectures and contributions to internal research seminars as well as presentations and posters on international conferences related to the subject of the project.
Paper 1: Identifying older adults' sedentary behaviour and physical activity levels in their local neighbourhood using GPS devices and skin taped accelerometers. Date: fall 2017
Paper 2: Older adults' movement patterns in their local community. Using GIS to map GPS and accelerometer data from a community based participatory approach. Date: spring 2018
Paper 3: The effect of a community-based participatory intervention, focusing on specific built environmental changes on older adults' movement patterns and sedentary behaviour. Date: spring 2019

Intention to publish date
01/04/2019

Individual participant data (IPD) sharing plan
The datasets generated during and/or analysed during the current study will be available upon request from Tanja Schmidt (tbschmidt@health.sdu.dk).

IPD sharing plan summary

Available on request

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Protocol article		19/05/2017	15/02/2021	Yes	No