Neighbourhood Environments, Physical Activity and Health for Older People: what have we learned from the I’DGO Project?

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I’DGO: the project vision

I’DGO is a three-year project, now being extended for a further four years, funded by EPSRC. The aim is to identify the most effective ways to ensure that the outdoor environment is designed inclusively, to improve the quality of life for older and disabled people. Key outputs will include guidance on the design of neighbourhood environments.
The I’DGO Consortium

OPENspace Research Centre
Edinburgh College of Art
Heriot-Watt University

Housing Corporation

Sensory Trust

Ricability

SURFACE
University of Salford

Dementia Voice

INCLUSIVE DESIGN FOR GETTING OUTDOORS
OPENspace: the approach

OPENspace has a multidisciplinary team researching planning, design and management of the environment

Constructivist approaches to understand people’s transactional relationship with their environment, based in PCT (Kelly, 1955)

People’s engagement with place (Canter, 1977)

Personal Projects (Little 1983) - a set of goal oriented, self-generated activities a person is planning

Conjoint analysis to look at trade-offs in real life decisions

Our approach treats respondents to surveys as co-investigators.
Background

Abundant evidence shows that a physically active lifestyle provides physical and mental health benefits for older people.

However, going outdoors can be difficult due to increasing frailty and environmental barriers.

A neighbourhood environment facilitating older people’s outdoor activities will most likely enhance their well-being.
Outdoor environments provide opportunities for physical activity, contact with nature and social interaction.

We want to understand what aspects of the environment are associated with older people’s activity and QoL, and to what extent they make a difference.
Research Questions

1. What are the mechanisms through which neighborhood environments enhance health?
2. How do perceived quality and accessibility of neighbourhood open spaces affect patterns of activity?
3. What features facilitate or hinder physical activity in outdoor spaces?
4. What are the most important environmental features for older people in their local open spaces?
5. How can we create accessible outdoor environments for older people?
### Data Collection Method

<table>
<thead>
<tr>
<th>Method</th>
<th>Sample Size</th>
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<tbody>
<tr>
<td>Postal questionnaire (2200 older people living in 20 local authorities)</td>
<td>$n = 211$</td>
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<tr>
<td>Distribution through local housing associations (older people living in sheltered housing)</td>
<td>$n = 102$</td>
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<tr>
<td>Translated sessions (2 minority ethnic groups)</td>
<td>$n = 22$</td>
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<tr>
<td><strong>Total Sample Size</strong></td>
<td>$n = 335$</td>
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<tr>
<td>Choice-based conjoint questionnaire (separate postal survey of same 20 LAs)</td>
<td>$n = 237$</td>
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Measures & Instruments

**Activity**: The frequency and duration of walking (to go places, for recreation, gardening and other activities)

**Health**: The number of days (in the last 30 days) poor health prevents the person from doing daily activities

**Happiness**: Life satisfaction (5-item scale: SWLS)

**Perceived supportiveness of neighbourhood open space**: A 30-item scale to measure the quality of a local open space and neighbourhood area

**Preferred local open space**: Choice-based conjoint questionnaire (preference judgments on 14 paired comparisons of local open spaces)

**Demographics**: Gender, age, living arrangement, postcode, functional status, education, occupation
1. What are the mechanisms through which neighborhood environments enhance health?

*Through time spent on outdoor activity*
- Time spent outdoors
- Walking outdoors

*Through the quality of the outdoor experience*
- Beyond time and quantity of activity outdoors, the quality of the experience (perhaps social and aesthetic dimensions) makes a difference.
People living in a supportive environment tend to spend a longer time outdoors. Those who perceive their neighbourhood environments as fairly or very supportive are more likely to be a high-level walker (≥ 2.5 hours/wk).
Supportive Neighbourhood Environments & Time Spent Outdoors

Supportiveness based on environmental attributes is a significant predictor of the time spent outdoors, regardless of functional capability.
People who perceive their neighbourhood as supportive report fewer unhealthy days.
Environmental support accounts for about 30% of the total variance in life satisfaction.
2. How do perceived quality and accessibility of neighbourhood open spaces affect patterns of activity?
3. What features facilitate physical activity in outdoor spaces?

Perceived quality of paths to local open spaces
- paths easy to walk on
- enjoyable to walk on
- no obstacles to getting to open space
3. What features facilitate physical activity in outdoor spaces?

Pleasantness of open space
- clean and well-maintained
- attractive trees and plants
- good for children’s play
- good for chatting with people
3. What features facilitate physical activity in outdoor spaces?

Good facilities
- enough seats to rest on in open space
- cafes, toilets etc
3. What features facilitate physical activity in outdoor spaces?

**Water features**
- River, beach or lake near home
- Attractive water feature
4. What are the most *important* environmental features for older people in their local open space?

Using choice-based conjoint questionnaire, we found that older people prefer an open space:

- without nuisance
- with cafes and toilets
- with dense trees and plants
- light traffic
- wildlife to watch
- well maintained
Preferred environmental features for local open space
Implications

People living in a supportive outdoor environment tend to be more active, healthier and happier than those living in an unsupportive environment.

Improving the quality of the outdoor environment (making the choice of going outdoors easy and enjoyable) appears to be an effective way to encourage an active lifestyle and conducive to a better QoL.
5. How can we create accessible outdoor environments for older people?

Design Guidance

2. Path conducive to sitting and thoroughfare (5 m approx wide)
Lack of nuisance
Facilities (seats, toilets, shelters, etc.)
High level of trees and plants
Pleasant open space
Pleasant open space
Light traffic on walking routes
Things to watch
Things to watch
Waterscapes
Good paths
Good paths
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