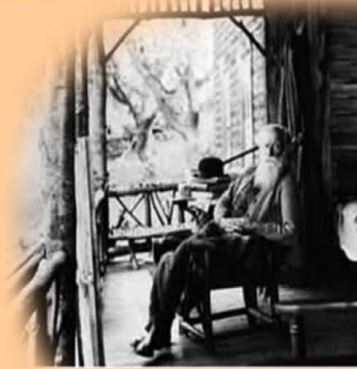



Enable Age




The Consortium

 **Division of Occupational Therapy,
Department of Clinical Neuroscience**
Lund University
Ass. Prof. Susanne Iwarsson
Lund, **Sweden** susanne.iwarsson@arh.lu.se

 **The German Centre for Research on Ageing at the
University of Heidelberg (DZFA)**
Department of Social and Environmental Gerontology
Dr. Frank Oswald, Prof. Dr. Hans-Werner Wahl, Dr.
Heidrun Mollenkopf
Heidelberg, **Germany** Oswald@dzfa.uni-heidelberg.de

 **Institute of Human Ageing, Department of
Primary Care**
University of Liverpool
Dr. Andrew Sixsmith
Liverpool, **United Kingdom** sixsmith@liv.ac.uk

 **Institute for Sociology, Hungarian Academy of
Sciences**
Dr. Zsuzsa Szeman
Budapest, **Hungary** szemanzs@elender.hu

 **Academic School of Occupational Therapy**
Riga Stradiņš University
Sīgne Tomsone
Riga, **Latvia** signet@navigator.lv

 **Department of Psychology and Speech Pathology**
Manchester Metropolitan University (MMU)
Dr. Judith Sixsmith
Manchester, **United Kingdom** j.sixsmith@mmu.ac.uk

The ENABLE-AGE Project

Enabling Autonomy, Participation, and Well-Being in Old Age:

The Home Environment as a Determinant for Healthy Ageing

Sponsored by the European Commission (QLKG-CT-2001-00334)



The ENABLE-AGE Project:

Enabling Autonomy, Participation, and Well-Being in Old Age: The Home Environment as a Determinant for Healthy Ageing

The
ENABLE-AGE
Consortium:

Five
countries:
Sweden
Germany
United
Kingdom
Hungary
Latvia



Co-ordinator:

Division of Occupational Therapy, Department of Clinical Neuroscience
Lund University
Prof. Susanne Iwarsson, PhD. Carita Nygren
Lund, Sweden



Contractors:

The German Centre for Research on Ageing at the University of Heidelberg (DZFA)
Department of Social and Environmental Gerontology
PhD. Frank Oswald, Prof. Hans-Werner Wahl, PhD. Heidrun Mollenkopf
Heidelberg, Germany



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University of Liverpool
PhD. Andrew Sixsmith
Liverpool, United Kingdom



Department of Psychology and Speech Pathology
Manchester Metropolitan University (MMU)
PhD. Judith Sixsmith
Manchester, United Kingdom



Institute for Sociology
Hungarian Academy of Sciences
PhD. Zsuzsa Szeman
Budapest, Hungary



Academic School of Occupational Therapy
Riga Stradins University
MD, Reg. OT Signe Tomsone
Riga, Latvia



Knowledge gaps and research needs

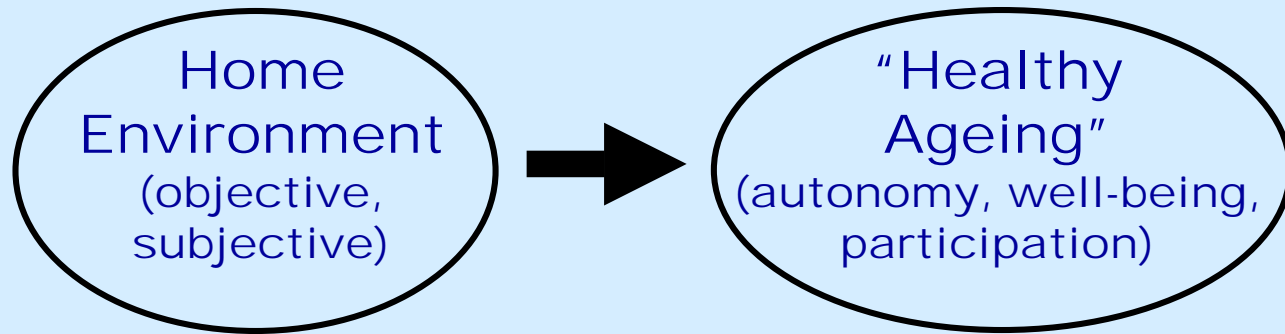
Need for

- more explicit consideration of the environment in aging studies
- better understanding and in-depth knowledge of person-environment fit processes
- exploration of relationships between home environment and health in very old age
- data on housing and health situation among very old people in different European countries

→ *The ENABLE-AGE Project strived to contribute to these research shortcomings*



Main aim of the ENABLE-AGE Project



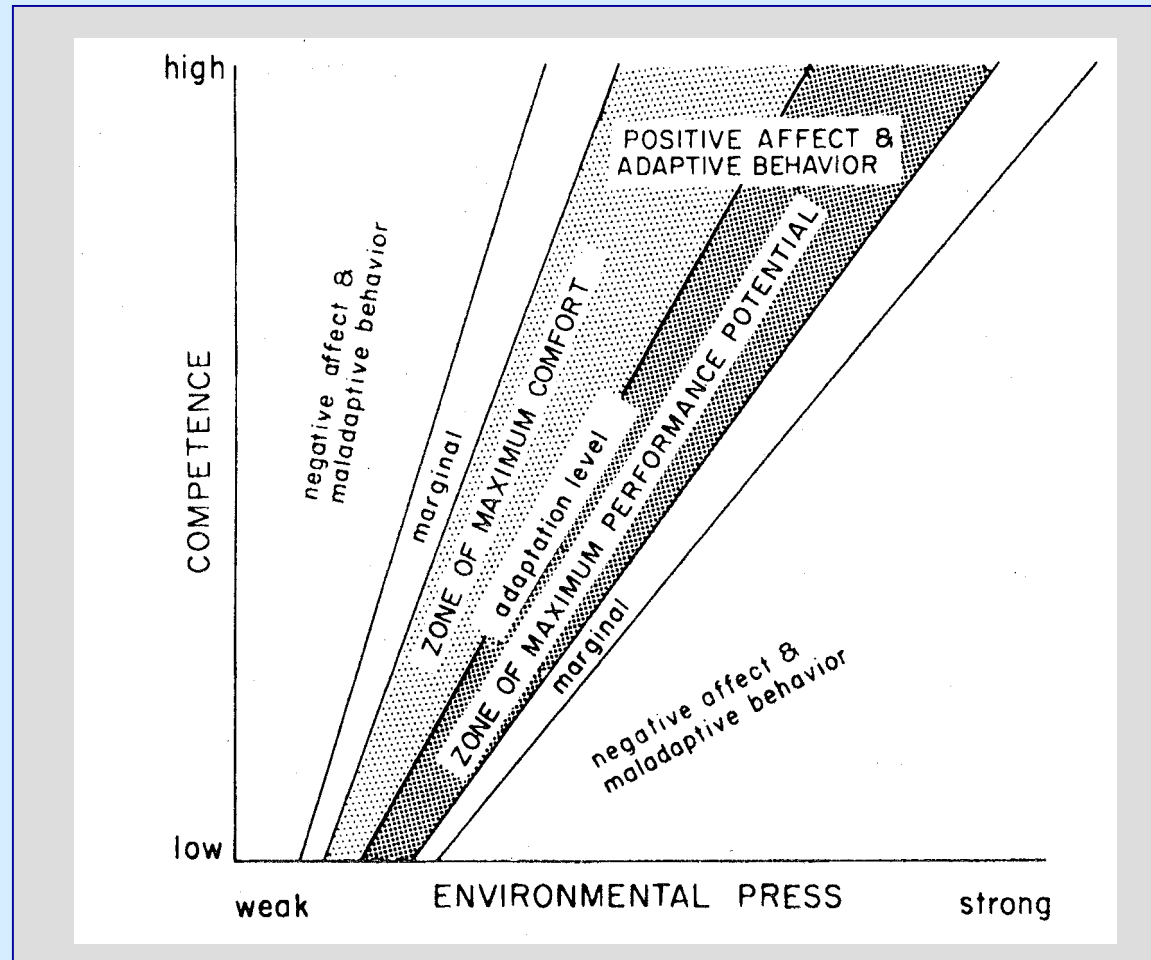
To examine, from a European perspective, the home environment as a determinant for **"Healthy Ageing"** →
Recommendations for evidence-based housing solutions across Europe

- In very old age
 - In private households
 - Living alone
-
- A red oval containing the text "Risks and potentials". Three red arrows point from the list items above to this oval.



Conceptual framework of ENABLE-AGE

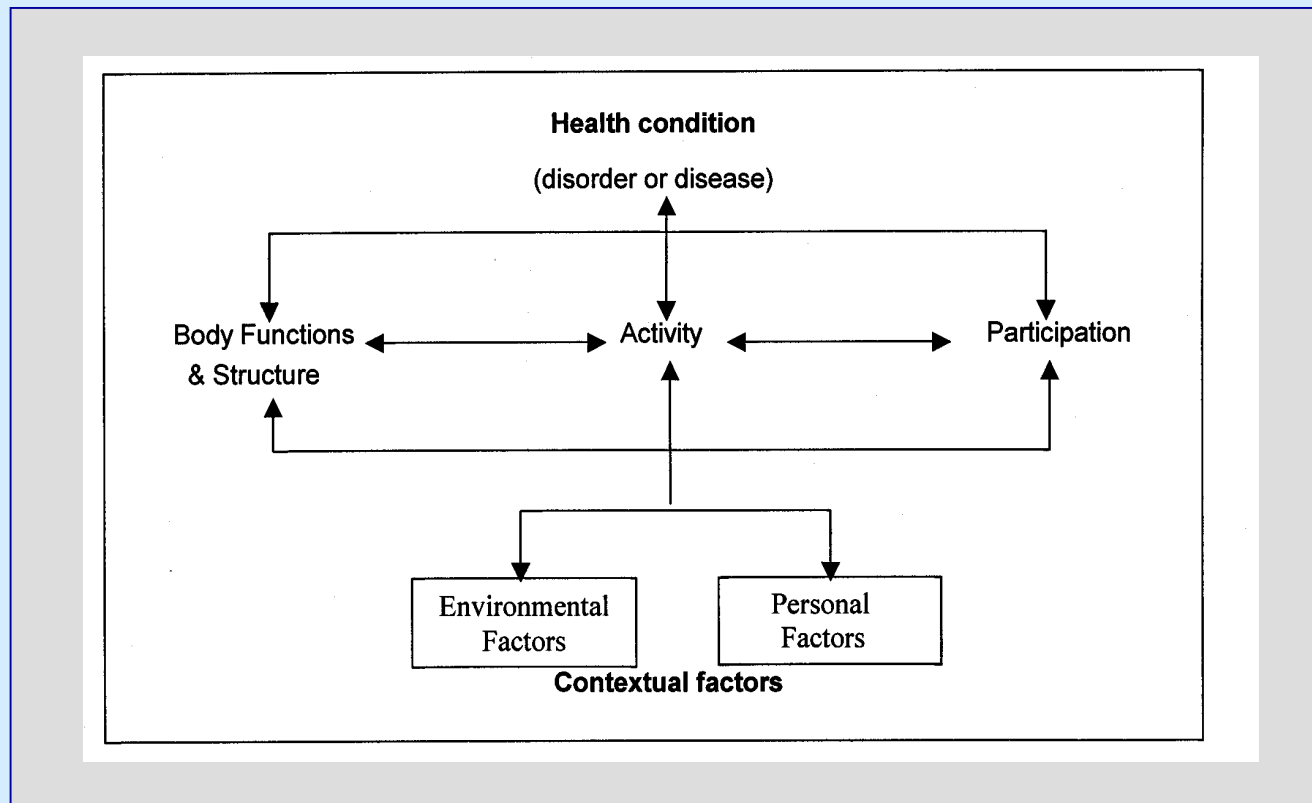
Lawton's Ecological Theory of Ageing (ETA)





Conceptual framework of ENABLE-AGE

The International Classification of Functioning,
Disability, and Health (ICF) (WHO, 2001)





ENABLE-AGE Conceptual Framework

Background Variables

Body Functions and Structure

- O - Mental Ability (MMSE)
- O - Disease List (ICD-10)
- O - Functional limitations (H-E)
- O - Visual Acuity
- S - Perceived Health
- S - Symptom List

Coping and Control / Personal Factors

- S - Control Beliefs (HCQ)
- S - Coping Styles (CPS)

Social Structure / Personal Factors

- O - Age
- O - Sex
- O - Ethnicity
- O - SES (Income, Education)

Contextual / Environmental Factors

Welfare State / National Context (macro-level)

- C - Social and Health Care Policies
- C - Policy and Legislation on Housing
- C - Norms, Regulations

Individual Context (micro-level)

- C - Health Services
- C - Infrastructure and Services in the Area: Conditions
- C - Infrastructure and Services in the Area: Needs
- C - Type of Area / District / Housing
- C - Social Network (Confident Person)
- C - Societal Support
- C - Cultural aspects
- C - Housing-related Societal Support

Mediating Variables

Perceived Housing / Person x Environment

- S - Housing Options (HOOP)
- S - Subjective Accessibility (UIMH)
- S - Meaning of Home (MOH)
- S - Housing Type (Indoor/Outdoor)
- S - Neighbourhood Attachment and Satisfaction
- S - Meaning of Home

Housing Conditions / Environmental Factors

- O - Environmental Barriers (Env. Component of the H-E)
- O - Housing Accessibility (H-E, Fit- index)
- O - Housing Conditions / Amenities / Standard
- O - Amount of Space / Number of Rooms
- O - Adaptations / Assistive Devices / Aids
- O - Year of Building / Duration of Living in Place / Home

Outcome Variables

"Healthy Ageing"

Activities, Participation and Well-Being

Autonomy / Activities

- O - Functional Ability (ADL/IADL)
- O - Performance Difficulties
- S - Perceived Functional Independence
- S - Perception of Independence

Participation

- S - Social Participation
- S - Leisure Activities
- S - Community Participation

Well-Being

- S - Affect (PANAS)
- S - Life Satisfaction
- S - Psychological Well-being (Ryff-Scales)
- S - Depression (GDS)
- S - Housing-related Well-being

- O = Objective Data
- S = Subjective Data
- C = Contextual factors

- Data from the ENABLE-AGE Survey Study
- Data from the ENABLE-AGE Update Review
- Data from the ENABLE-AGE In-Depth Study



Definition of accessibility

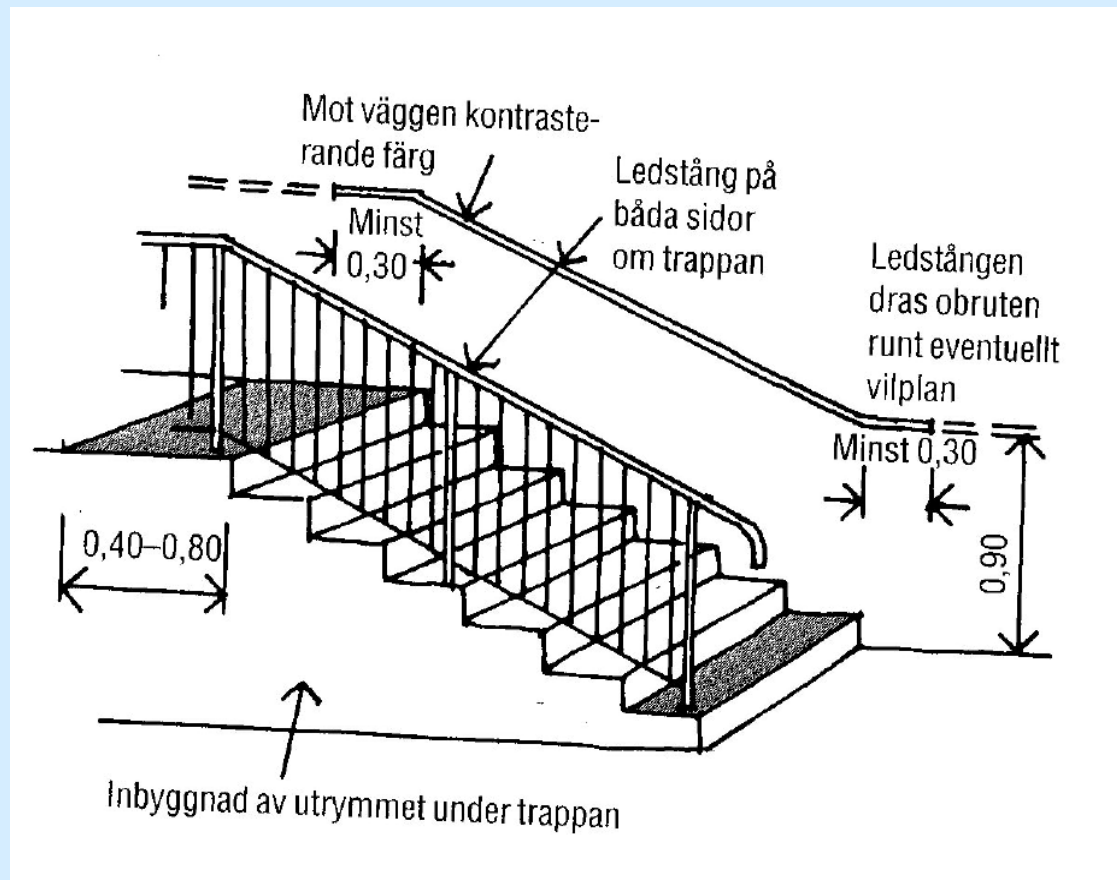
A relative concept, denoting the meeting between the person's functional capacity and the demands from the environment

Comprises

- a) a personal component
- b) an environmental component



Based on official norms, guidelines & legislation





Definition of usability



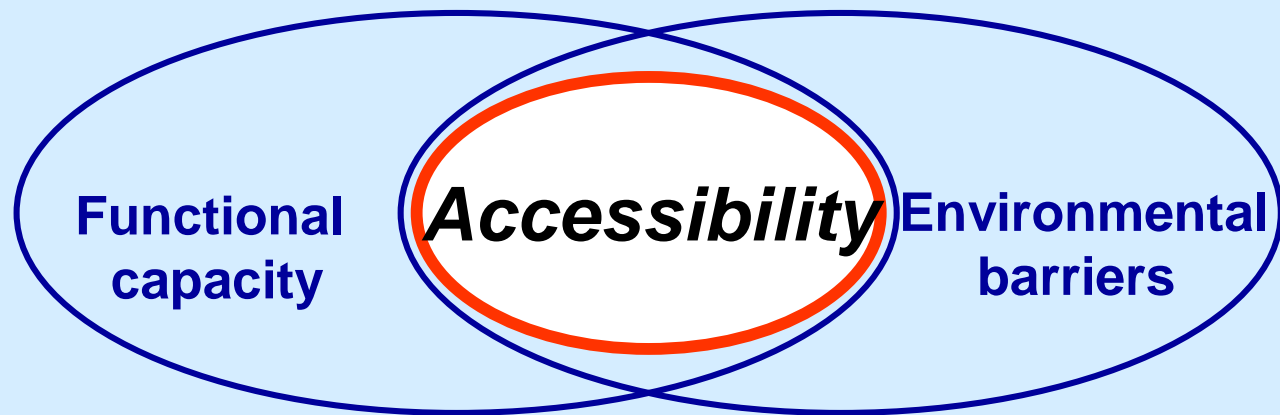
A person should be able to use, i.e. to move around, be in and use, the environment on equal terms with other citizens

Comprises a third component; activity

Subjective, i.e. based on user perceptions



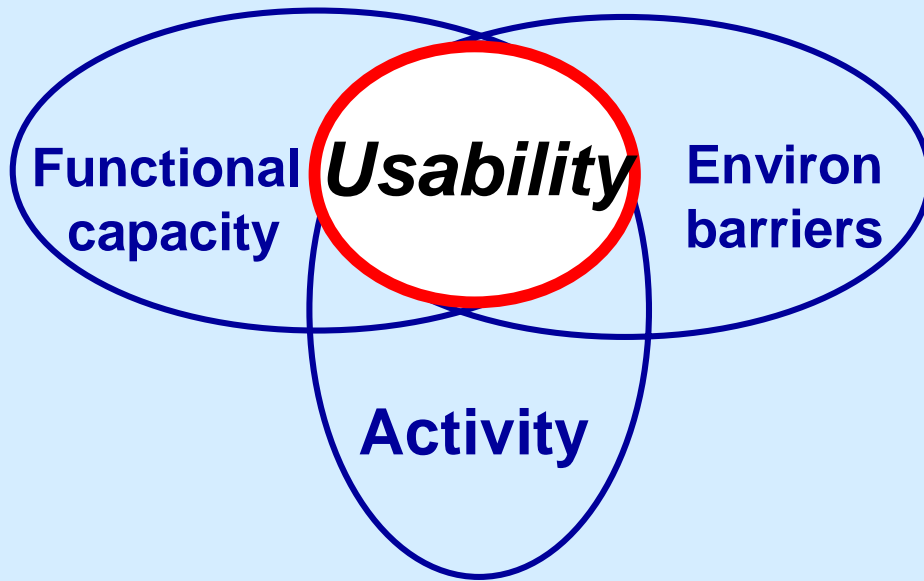
Different perspectives....



Accessibility is objective in character
Person-environment relationships



Different perspectives....



Usability is subjective in character



Person-environment-activity transactions



Methods

The ENABLE-AGE Survey Study

Well-proven instruments and study-specific questions at home-visits.

Longitudinal design with a one-year interval (between T1 and T2).

- Basic demographics, socio-structural background
- Objective person-environment fit (P-E fit)
- Subjective evaluations of the environment
- Psychological components
- Outcome of healthy ageing



The Housing Enabler

PERSONAL COMPONENT

Rating form for assessment of functional limitations (N=13) and dependence on mobility aids (N=2)

ENVIRONMENTAL COMPONENT

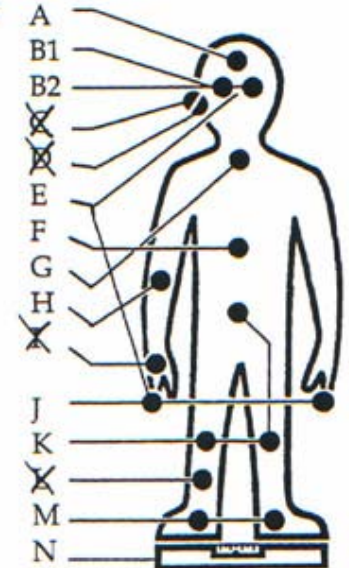
Part of rating form for assessment of environmental barriers (N=188)

(Iwarsson & Slaug, 2001)

Example

First mark the functional limitations and dependence on mobility aids that have been observed. Then copy the crosses to all the rating forms for environmental barriers.

- DIFFICULTY INTERPRETING INFORMATION
- SEVERE LOSS OF SIGHT
- COMPLETE LOSS OF SIGHT
- SEVERE LOSS OF HEARING
- PREVALENCE OF POOR BALANCE
- INCOORDINATION
- LIMITATIONS OF STAMINA
- DIFFICULTY IN MOVING HEAD
- DIFFICULTY IN REACHING WITH ARMS
- DIFFICULTY IN HANDLING AND FINGERING
- LOSS OF UPPER EXTREMITY SKILLS
- DIFFICULTY BENDING, KNEELING, ETC.
- RELIANCE ON WALKING AIDS
- INABILITY TO USE LOWER EXTREMITIES
- EXTREMES OF SIZE AND WEIGHT



Mark the observed environmental barriers with a cross. Then put a circle around the points (1–4) in the squares at the intersections of functional limitations and environmental barriers. The total of the points is a measure of the degree of accessibility problems.

| A. OUTDOOR ENVIRONMENT | A | B1 | B2 | X | X | E | F | G | H | X | J | K | X | M | N | |
|---|---|----|----|---|---|---|---|---|---|---|---|---|---|---|---|---|
| <u>General (pp. 37–42, 183–96)</u> | | | | | | | | | | | | | | | | |
| 1. Narrow paths (less than 1.3 m). | | | | | | 3 | 3 | | | | | | | 3 | 3 | 1 |
| X Irregular walking surface (includes irregular joins, sloping sections, etc.). | | 2 | 3 | | 1 | 1 | | 3 | | | | | 3 | | 3 | |
| 3. Unstable walking surface (loose gravel, sand, clay, etc.). | | 2 | 3 | | 3 | 3 | 2 | | | | | | 3 | | 4 | |



Methods

Subjective aspects of housing

- Usability in My Home, UIMH
- Meaning of Home, MOH
- Housing Control, HCQ
- Housing Satisfaction



Methods

Variables of „Healthy Ageing“

Autonomy: **Behavioural aspect of “healthy ageing”**

ADL dependence (ADL-staircase, Sonn, & Hulter Åsberg, 1991)

Well-being: **Cognitive and emotional aspects of “healthy ageing”**

Life satisfaction

Environmental mastery (Ryff, 1989)

Affect (PANAS, Watson, Clark, & Tellegen, 1988)

Depression (GDS, Yesavage et al., 1983)



Methods

The ENABLE-AGE In-depth Study

Qualitative semi-structured interviews in home-visits with a subsample of survey participants, followed by consultation interviews

Team-based approach informed by Grounded Theory

- Completed in two stages, after T1 and before / parallel to T2



Sample description

- Sampling in urban regions, stratified for age and gender
- Community dwelling very old people, living alone (T1, N = 1,918; T2, N = 1,356)
- Different life expectancy and different onset of “Fourth Age” in Eastern vs. Western European countries → implications for sampling

| Age (at T1) | Gender | Sweden | Germany | United Kingdom | Hungary | Latvia | Total |
|---------------------|--------|------------|------------|----------------|------------|------------|-------------|
| 75-79 years old | Women | --- | --- | --- | 145 | 176 | 378 |
| | Men | --- | --- | --- | 36 | 21 | |
| 80-84 years old | Women | 147 | 165 | 169 | 171 | 92 | 974 |
| | Men | 53 | 47 | 76 | 40 | 14 | |
| 85-89 years old | Women | 149 | 188 | 94 | --- | --- | 566 |
| | Men | 48 | 50 | 37 | --- | --- | |
| Total N (T1) | | 397 | 450 | 376 | 392 | 303 | 1918 |
| Total N (T2) | | 314 | 322 | 316 | 179 | 225 | 1356 |

- In-depth studies, N = 189 → Diversity sampling based on survey data



Methods

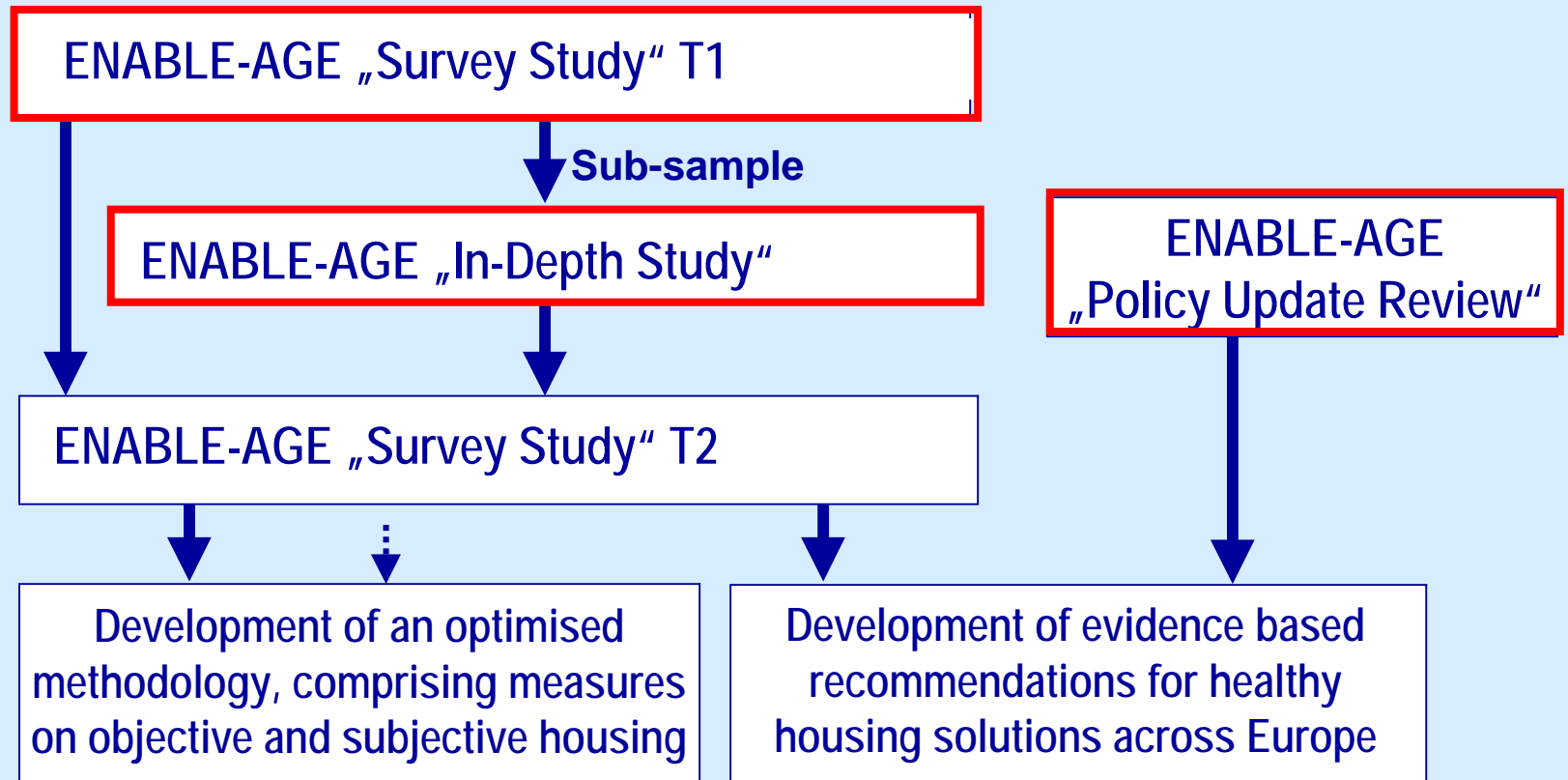
The ENABLE-AGE Update Review

A five-country macro level update of housing policies and legislation, based on databases, literature, and expert consultation.

- 1. Cross-national revision of instrument for accessibility assessment*
- 2. National reports and international comparison*



Design (01/2002-12/2004)





Relationships Objective x Subjective Housing

| | Sweden | Germany | UK | Hungary | Latvia |
|--|---------------|----------------|--------------|----------------|---------------|
| Eigenvalues | 0.3*** | 0.1*** | 0.2*** | 0.1*** | 0.3*** |
| Canonical correlations | .48 (73%) | .31 (75%) | .39 (67%) | .26 (23%) | .50 (76%) |
| <u>Objective housing set</u> | | | | | |
| Environmental barriers (tot score) | -.38 | -.14 | -.37 | .23 | -.35 |
| Housing accessibility (total score) | .99 | 1.0 | .99 | .78 | 1.0 |
| <u>Subjective housing set</u> | | | | | |
| UIMH (physical env. aspects) | .73 | .41 | .53 | .45 | -.14 |
| UIMH (activity aspects) | .73 | .83 | .53 | .69 | .44 |
| MOH (behavioural aspects) | .52 | .59 | .49 | .65 | .81 |
| MOH (physical aspects) | -.02 | .36 | .61 | .16 | .22 |
| MOH (cogn / emotional aspects) | -.19 | .39 | .00 | .04 | .34 |
| MOH (social aspects) | .14 | .39 | .23 | -.15 | .49 |
| HQC (ext. control) | -.41 | -.41 | -.51 | -.36 | -.67 |
| Housing satisfaction | .06 | .05 | .57 | .28 | .15 |

Note. Partial correlations, controlled for health and socio-economic status indicators.



Relationships Housing x Health

Simple correlations objective housing x "healthy ageing" indicators

| Housing variables | Country | ADL-independence | Life satisfaction | Environmental mastery | Positive affect | Negative affect | Depression |
|------------------------|---------|------------------|-------------------|-----------------------|-----------------|-----------------|------------|
| Environmental barriers | Germany | 0.02 | -0.04 | -0.10 | 0.03 | 0.07 | -0.05 |
| | Hungary | -0.04 | -0.03 | -0.16 | 0.07 | 0.02 | 0.18 |
| | Latvia | -0.00 | 0.05 | 0.03 | -0.05 | -0.15 | -0.03 |
| | Sweden | 0.12 | 0.06 | -0.07 | -0.09 | -0.10 | -0.03 |
| | UK | -0.05 | -0.04 | -0.02 | 0.04 | 0.00 | 0.12 |
| Housing accessibility | Germany | 0.39 | 0.20 | 0.27 | 0.25 | -0.15 | -0.29 |
| | Hungary | 0.19 | 0.32 | 0.10 | 0.16 | -0.20 | -0.47 |
| | Latvia | 0.11 | 0.00 | 0.00 | 0.25 | -0.03 | -0.21 |
| | Sweden | 0.11 | 0.18 | 0.07 | 0.20 | -0.09 | -0.31 |
| | UK | 0.52 | 0.18 | 0.25 | 0.18 | -0.11 | -0.40 |

Note. Spearman partial correlations, controlled for basic health and socio-economic status indicators.

→ Not the barriers but low magnitude of accessibility problems (p-e fit) are related to independence and environmental mastery as well as less depression in all sites



Usability & Housing Satisfaction

Generally positive perceptions...
...but there were risks for
accidents
...and people were less positive
over time

Some uncertainty whether the
home would suit if the situation
changed...

The oldest persons had difficulties
managing their home, and
things could have been more
optimally arranged...

Outdoor activities diminished over
time...





Conclusions

- **Research on housing and health should consider both objective and subjective aspects of housing**
- **Accessibility is related to subjective aspects of housing, in particular to performance of activity**
- **It is accessibility (personal capacity in relation to environmental barriers) rather than only environmental barriers that is related to health**



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the ENABLE-AGE Project
at...

www.enableage.arb.lu.se