Framing of Housing and Health in Old Age From a European Perspective

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Content

1. Some basic remarks and selected data on housing in old age in Europe
2. Conceptual remarks on housing and health in old age from an Environmental Gerontology perspective
3. Some core topics for research and application and related findings (from own studies)
4. Discussion and outlook
Content

1. Some basic remarks and selected data on housing in old age in Europe

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4. Discussion and outlook

.Disclaimer: Personal remarks, not comprehensive, findings from studies co-authored by many colleagues
1. Basic remarks / data on housing in Europe

Facing comparable societal challenges across places (e.g., Scharf, 2010)

• Demographic Change
• Social Inequality
• Globalisation
• Urbanisation

→ Related to issues of housing and person-environment exchange at large!

Searching for new solutions in research / politics (e.g., EC, 2010)

• Several projects on health and housing, mobility, technology with respect to older adults (e.g., European frameworks 5 and 6, also “Horizon 2020”)
• Identification of common problems and future topics of housing in later life, e.g., in “FUTURAGE - A roadmap for European Ageing Research” workshops (with respect to p-e exchange)

→ Seven major research priority themes for active ageing related to housing
1. Basic remarks / data on housing in Europe

Seven Major research priority themes identified by FUTURAGE - A roadmap for European Ageing Research (EC, 2011)
The percentage of people 65+ in Latvia is comparable to the EU mean level (ca. 17.4%).

From: StBA [Federal Bureau of Statistics] (2011). Im Blickpunkt: Ältere Menschen in Deutschland und der EU [In the focus: Older adults in Germany and the EU]
1. Basic remarks / data on housing in Europe

Further live expectancy in years at the age of 65 (in 2009)

Latvia is among the countries with lowest further life expectancy rates in Europe

From: StBA [Federal Bureau of Statistics] (2011). Im Blickpunkt: Ältere Menschen in Deutschland und der EU [In the focus: Older adults in Germany and the EU]
Latvia is among the countries with highest poverty risk rates for older adults in Europe

From: StBA [Federal Bureau of Statistics] (2011). Im Blickpunkt: Ältere Menschen in Deutschland und der EU [In the focus: Older adults in Germany and the EU]
1. Basic remarks / data on housing in Europe

Household conditions (%) of people 65+ in some EU countries (2009)

<table>
<thead>
<tr>
<th></th>
<th>Living alone</th>
<th>Living with partner</th>
<th>Other household types</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lettland</td>
<td>26</td>
<td>27</td>
<td>46</td>
</tr>
<tr>
<td>Litauen</td>
<td>39</td>
<td>31</td>
<td>29</td>
</tr>
<tr>
<td>Estland</td>
<td>20</td>
<td>38</td>
<td>42</td>
</tr>
<tr>
<td>Malta</td>
<td>24</td>
<td>40</td>
<td>35</td>
</tr>
<tr>
<td>Spanien</td>
<td>20</td>
<td>41</td>
<td>39</td>
</tr>
<tr>
<td>Portugal</td>
<td>21</td>
<td>45</td>
<td>34</td>
</tr>
<tr>
<td>Finnland</td>
<td>35</td>
<td>53</td>
<td>12</td>
</tr>
<tr>
<td>Frankreich</td>
<td>36</td>
<td>54</td>
<td>9</td>
</tr>
<tr>
<td>Zypern</td>
<td>16</td>
<td>55</td>
<td>29</td>
</tr>
<tr>
<td>Deutschland</td>
<td>34</td>
<td>57</td>
<td>9</td>
</tr>
<tr>
<td>Niederland</td>
<td>36</td>
<td>59</td>
<td>5</td>
</tr>
</tbody>
</table>

- Differences between Latvia and the EU or Germany ➔ future role of singles/couples?
- Future topics: New risk groups, new neighbourhood roles (responsibility), urban vs. rural ageing (density), technology (assistive living, social exchange, robotics),...
- No report of future housing types or current housing projects across Europe

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2. Conceptual remarks on housing and health

Own focus: socio-physical environments
(in / out, behaviour / experience, incl. technology)

Economy

Sociology

Psychology

Anthropology

Architecture

Biology

Gerontology

Medicine

Society / Country / World

Community / City / Region

Neighbourhood / Quartier

House / Fellow-Dweller

Person / Body

Organ

Cell

Molecular level

(...)

Interdisciplinary Ageing Research
2. Conceptual remarks on housing and health

<table>
<thead>
<tr>
<th>Person-environment processes</th>
<th>Developmental outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Longevity, better health, and more societal and personal freedom are reflected in p-e processes of agency as people age (e.g., Wahl &amp; Oswald, 2010)</td>
<td></td>
</tr>
<tr>
<td><strong>proactive use of environmental richness in “third” age</strong> (e.g., meaningful activities in daily life, enjoying close relationships in the neighbourhood, making voluntary moves from home to home, becoming a “silver surfer” at home)</td>
<td></td>
</tr>
<tr>
<td><strong>compensating with environmental press in “fourth” age</strong> (e.g., variety of assisted living options, establishing / maintaining social relationships in the community after widowhood, compensatory use of technology)</td>
<td></td>
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</tbody>
</table>

Behavior → Agency → Autonomy

Wahl, Iwarsson & Oswald (2012)
2. Conceptual remarks on housing and health

<table>
<thead>
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<th>Person-environment processes</th>
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</thead>
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<tr>
<td>Housing-related control beliefs (Levenson, 1973; Lachman, 1993)</td>
<td></td>
</tr>
<tr>
<td>Environmental docility / environmental proactivity (Lawton &amp; Nahemow, 1973; Lawton, 1989)</td>
<td></td>
</tr>
<tr>
<td>Person-environment fit (Carp &amp; Carp, 1984; Kahana, 1975)</td>
<td></td>
</tr>
</tbody>
</table>

Behavior → Agency → Autonomy

→ Acquisition, utilisation, adaptation, alteration

Housing is „the everyday sequence of domestic daily life within the social-physical context of the home.“

(Saup, 1993, p. 93)
2. Conceptual remarks on housing and health

<table>
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<td>Experience</td>
<td>Belonging</td>
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- Biographically developed attitudes, habits and preferences are reflected in person-environment (p-e) processes of belonging in later life (e.g., Rowles, Oswald & Hunter, 2003; Rubinstein & De Medeiros, 2003; Wahl & Oswald, 2010)

Wahl, Iwarsson & Oswald (2012)
2. Conceptual remarks on housing and health

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→ Evaluation, bonding, meaning

Residential satisfaction
(Galster, 1987; Weidemann & Anderson, 1985)

Place attachment, place identity, ecological self
(Lalli, 1992; Neisser, 1988; Proshansky, 1978; Proshansky et al., 1983)

Meaning of home (e.g., “comfort zone”; “insideness“, “extension of self“)
(Golant, 2011; Rowles, 1983; Rubinstein, 1989)

„A human being needs – in order to survive – an (...) area of belongingness and comfort [Geborgenheit]. If you take away (...) his home –, the person‘s inner disruption is an inevitable consequence.“
(Bollnow, 1963, S. 136)
2. Conceptual remarks on housing and health

Person-environment processes

Experience → Belonging

Behavior → Agency

Developmental outcomes

Identity

Well-being

Autonomy

Wahl, Iwarsson & Oswald (2012)
2. Conceptual remarks on housing and health

Wahl, Iwarsson & Oswald (2012)
2. Conceptual remarks on housing and health

Wahl, Iwarsson & Oswald (2012)
2. Conceptual remarks on housing and health

From a conceptual perspective one need to consider:

- the physical & social (& technical) environment
- the indoor & out-of home (neighbourhood) environment
- processes of Agency (behaviour) & Belonging (experience)
- a broad concept of health (health-related outcomes)
- $P \times E \times \text{time}$
Content

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3. Some core topics for research and application and related findings (from own studies)

4. Discussion and outlook
3. Some core topics and related (own) findings

3.1 Need for a differentiated assessment and consideration of Agency-related aspects (e.g., accessibility, adaptation, creation)

3.2 Need for a differentiated assessment and consideration of Belonging-related aspects (e.g., satisfaction, meaning, control)

3.3 Need to address Agency and Belonging with respect to housing indoors and out-of-home (e.g., district, walking, walkability)

3.4 Need for a differentiated perspective on relationships between housing and health-related outcomes (e.g., autonomy & well-being, social participation, future orientation)
3. Some core topics and related (own) findings

3.1 To consider Agency-related aspects

Note. \( N = \) cross sectional data from the Swedish and German ENABLE-AGE sub-sample of 848 community dwelling 80-89 years old participants at T1. Diameter of circles indicate the number of observations.

→ No. of housing accessibility problems is higher in the older age groups, whereas the no. of environmental barriers is not

From: Oswald et al. (2008): Projekt ENABLE-AGE
3. Some core topics and related (own) findings

3.1 To consider Agency-related aspects

Combination of adaptation and stimulation at home
3. Some core topics and related (own) findings
3.1 To consider Agency-related aspects

→ Promoting creative patterns of adaptation

Increased levels of control at most favourite places at home („control center“ < „living center“)
3. Some core topics and related (own) findings

3.2 To consider Belonging-related aspects

Four-domain-model of perceived housing

\[ \chi^2 = 78.6 \ (p < .001) \]

\[ N = 1.223 \ (80-89 \text{ Jahre alt}) \]

\[ \text{RMSEA} = 0.041 \]

\[ \text{NFI} = 0.948 \]

\[ \text{CFI} = 0.964 \]

> Multi-group SEM revealed that perceived housing is best displayed by the selected four constructs, reflecting for different domains (correlation allowed)

> Comparable relationships between the constructs in different European sites indicating comparable concepts of perceived housing in very old age

\( (\text{Oswald et al., 2006}) \)

Note. Confirmatory factor structure of the set of instruments on perceived housing. Numbers attached to double-headed arrows: Correlations for German / Swedish / UK sample.
3. Some core topics and related (own) findings

3.2 To consider Belonging-related aspects

Four-domain-model of perceived housing

Multi-group SEM revealed that perceived housing is best displayed by the selected four constructs, reflecting for different domains (correlation allowed)

Comparative relationships between the constructs in different European sites indicating comparable concepts of perceived housing in very old age

(Oswald et al., 2006)
3. Some core topics and related (own) findings

3.2 To consider Belongspect

Lots of things in the district remind me of my own past.

I have got native feelings for my district.

In other districts, my district is seen as possessing prestige.

My personal future is closely tied up with my district.

Covers past (biography) and future home (staying put) bonding

Stronger bonding in village-like neighborhood

Urban-related identity does not differ due to age group but to district

Urban Identity Scale
(Lalli, 1992; Range 0-20; α=.75-.88)

BH) Inner city belt

(SH) Village-like district

(NV) High-rise apartment complex

I have got native feelings for my district.

Lots of things in the district remind me of my own past.

This district is very familiar to me indeed.

In other districts, my district is seen as possessing prestige.

My personal future is closely tied up with my district.
3. Some core topics and related (own) findings

3.3 To address housing in the neighbourhood

- **Long living duration**: E.g., in the Frankfurt BEWOHNT-project N=595 community-dwelling participants 70-89 years old lived 59.4 years in Frankfurt, 45.3 years in the same district and 37.8 years in the same apartment (Oswald et al., 2013)

- **Action range / place attachment**: Participants have been asked where they move around regularly (agency), as well as what they would consider as their perceived neighbourhood (belonging)

  ➔ Although participants lived in different places across the city district, central places and paths are reported to be used most often and are part of common shared perceived neighbourhoods ➔ important places for community-based activities and experience (e.g., projects on “urban gardening”, the “new responsibility” etc.)
3. Some core topics and related (own) findings

3.3 To address housing in the neighbourhood

„What are your regular trips? / Where are you going frequently?” (Agency)
3. Some core topics and related (own) findings

3.3 To address housing in the neighbourhood

“Can you mark / circle the area you personally would call your neighbourhood?“ (Belonging)
3. Some core topics and related (own) findings
3.3 To address housing in the neighbourhood

Mobility diaries: 10,739 documented trips across 7,414 days
Purposes: 37% shopping, 26% relaxation, 14% health, 13% social activities, 7% culture

54% of all trips are walking trips → 58% among the 80-89 years old!

32% of all trips → car

17% of all trips → public transport

8% of all trips → bicycle

About 1/3 of all trips are done together with another person (couple households: 50%, single households: 20%)
3. Some core topics and related (own) findings

3.3 To address housing in the neighbourhood

Out-of-home mobility and cognitive impairment
(Isaacson & Shoval, 2010)

- Persons with cognitive impairment (MCI and dementia) have different out-of-home mobility patterns compared to cognitively healthy persons

- Walking appears to be linked to better daily mood for PWD ($r = .35$) (Kaspar, Oswald, et al., 2012, N = 141, 50-84 years old)

- Mobility is linked to daily mood in a differential way across the course of a regular week, with stronger links on the weekend compared to workdays
3. Some core topics and related (own) findings

### Housing variable set

**Objective housing**
- Environmental barriers (total score)
- Magnitude of accessibility problems

**Perceived housing**
- Usability in the home
  - Physical environmental aspects
  - Activity aspects
- Meaning of home
  - Behavioural aspects
  - Physical aspects
  - Cognitive-emotional aspects
  - Social aspects
- Housing-related external control beliefs
- Housing satisfaction

### "Healthy ageing" variable set

**Autonomy**
- Independence in daily activities (ADL)
- Perceived functional independence

**Well-being**
- Life satisfaction
- Environmental mastery (Ryff)
- Depression (GDS)
- Positive affect (PANAS)
- Negative affect (PANAS)

---

3.4 Links between housing x health (autonomy / well-being)

How is housing linked to autonomy and well-being?

---

From: Iwarsson et al., 2007; Nygren et al., 2007; Oswald et al., 2007, The Gerontologist, 47
3. Some core topics and related (own) findings

**Housing variable set**

**Objective housing**
- Environmental barriers (total score)
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**Perceived housing**

**Usability in the home**
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**Meaning of home**
- Behavioural aspects
- Physical aspects
- Cognitive-emotional aspects
- Social aspects

**Housing-related external control beliefs**

**Housing satisfaction**

**"Healthy ageing" variable set**

**Autonomy**
- Independence in daily activities (ADL)
- Perceived functional independence

**Well-being**
- Life satisfaction
- Environmental mastery (Ryff)
- Depression (GDS)
- Positive affect (PANAS)
- Negative affect (PANAS)

### 3.4 Links between housing x health (autonomy / well-being)

- Participants with good accessibility (not no. of barriers!), who perceive their home as useful and meaningful and who think that others are not responsible for their housing situation, are independent in everyday activities, have a better well-being and suffered less from depressive symptoms.

- Findings are partially comparable in different European settings.

From: Iwarsson et al., 2007; Nygren et al., 2007; Oswald et al., 2007, The Gerontologist, 47
3. Some core topics and related (own) findings

3.4 Links between housing x health (autonomy / well-being)

- Do housing aspects predict outcomes of ageing over time?

→ Emphasizing on selected housing and outcome variables from ENABLE-AGE (N = 847 participants aged 80 to 89 years at T1 in Sweden & Germany, 636 were re-assessed one year later at T2)

→ Cross-sectional: Objective p-e misfit is closer linked with daily independence, control beliefs are closer linked with well-being (Wahl et al., 2009)

→ Follow-Up: Accessibility problems at T1 predict decrease in daily independence and depression over one year, while control belief did not play a role in this regard (Wahl et al., 2009)

→ Longitudinal: Mid-range comparisons between survivors and non-survivors over 6 years indicate that regular neighborhood participation predict mortality beside health variables (Kaspar et al., in prep.)
3. Some core topics and related (own) findings

3.4 Links between housing x health (autonomy / well-being)

From: Oswald et al. (2013) BEWOHNT-study (N = 595, 70-89 years old)
3. Some core topics and related (own) findings

3.4 Links between housing x health (social participation)

Social participation, cohesion, control, bonding, exchange, in the neighbourhood
3.4 Links between housing x health (social participation)

Qualitative data analysis (Grounded Theory) based on n = 40 transcribed semi-structured interviews on housing and healthy aging

Subtle, inward oriented dimension of social participation consists of nostalgic reminiscence or interaction with wider society, e.g., in terms of mass media consumption

Then I switched on the radio, here at home (...) I heard everything so clearly, just as if I had been there, no, even better (...) ,I was so thrilled.“

From: Naumann (2005): Projekt ENABLE-AGE
3. Some core topics and related (own) findings

3.4 Links between housing x health (social participation)

- **The „subtle“ forms of social participation are more frequent in very old age**
- **Differences due to city district (village type neighbourhood higher compared to both other districts)**
- **Social participation is predicted by health, self-efficacy, accessibility and neighbourhood attachment**

Anmerkung: Formen sozialer Teilhabe von 1 = trifft überhaupt nicht zu bis 5 = trifft sehr gut zu, in Anlehnung an Naumann, 2004. Unterschiedstestung mit n.s. = nicht signifikant, $p < .05^*$, $p < .01^{**}$, $p < .001^{***}$. 

![Graph showing differences in social participation across city districts](image)
### 3. Some core topics and related (own) findings

#### 3.4 Links between housing x health (future orientation)

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Stand. weight</td>
</tr>
<tr>
<td>Age (in years)</td>
<td>-0.10</td>
</tr>
<tr>
<td>Expected further years of life (in years)</td>
<td>0.27 ***</td>
</tr>
<tr>
<td>Household type (with partner)</td>
<td>0.03</td>
</tr>
<tr>
<td>Duration of living in same district (years)</td>
<td>-0.01</td>
</tr>
<tr>
<td>Balance of changes in the neigh. (past)</td>
<td>0.01</td>
</tr>
<tr>
<td>Neighb. identification (urba-related identity)</td>
<td>0.32***</td>
</tr>
<tr>
<td>Social cohesion</td>
<td>-0.02</td>
</tr>
<tr>
<td>Accessibility problems (Housing Enabler)</td>
<td>-0.02</td>
</tr>
<tr>
<td>Balance resources (gains and losses)</td>
<td>-0.12 *</td>
</tr>
</tbody>
</table>

**Explained variance:** $R^2$ (adj. $R^2$) **23.6% (21.8%)**

“Most probably I will still live here in 5 years from now.”

- Expected further years of life (+)
- Neighbourhood identification and attachment (+)
- Not: Accessibility problems
- Perceived losses (-)

Oswald et al. (2013): Project BEWOHNT, N = 595, 70-89 years old
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4. Discussion and outlook
4. Discussion and outlook

We could see that in very old age …

1. Housing is more than barriers and access, i.e. meaning is meaningful (> functional)
2. Housing happens indoors and out-of-home, e.g., while walking through the district
3. Differentiated assessments lead to differentiated findings (measurements needed!)
4. Agency and belonging are both related to healthy aging outcomes
5. This relationship holds for different cultural (urban) settings across Europe
6. Housing characteristics and processes can predict healthy outcomes over time
7. Housing processes of belonging (e.g., social cohesion, urban-related identity) can not only explain well-being, but “buffer” negative health effects in very old age
8. There are subtle forms of social participation linked to healthy aging
9. Future housing expectations are triggered also by urban-related identity
10. Housing and health should be addressed by qualitative and quantitative methods and within interdisciplinary teams (e.g., gerontology, OT, psychology, geography)
4. Discussion and outlook

On the individual level: Task to...

- anticipate and face future housing needs in a playful and open-minded manner, and to transform them into behavior
- proactively use and change environmental housing options (e.g., neighborhood, technology) according to own wishes
- consider that there is a future even in very old age to be filled with p-e exchange beyond support and maintenance (e.g., stimulation)

On the society level: Task to...

- understand the intertwined nature of the functional and experiential home and to translate into professional care and counseling programs
- develop educational pathways for p-e regulations across the lifespan (incl. everyday educational opportunities)
- prepare home alternatives suitable to preferences of future cohorts
4. Discussion and outlook

Some open questions (*s. Wahl, Iwarsson & Oswald, 2012)*:

- Need for more bridge-building between research related to models of aging well (SOC) and explicit consideration of P–E interactions
- Need for more research on the intersection of the aging and environment perspective and biogerontology / neuroscience
- Evidence for new cohorts („Baby Boomer“: experience, openness)?
- Need for new foci in housing research and practice, e.g., the “new responsibility in the neighbourhood”, social / emotional robotics at home, new joint types of housing, ...
Thank You!

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