Mit den Augen betagter Frauen MABF – analysis and visualization of public space qualities as seen from the perspective of elderly women. A pilot study

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Picture reference: dpa, Archivbild
Context, research objectives and sample

Physical activity and social contact as essential determinants for healthy aging, independence and a high quality of life (Bachmann/Burla/Kohler 2015; Uchino et al. 2012)

i.a.
Which socio-spatial features for elderly women in relation to the dimensions "walkability" and "enabling social contact" and therefore healthy aging are to identify?

Target group: elderly women (>75 J.), living in single households in the defined area; motivity
With the eyes of elderly women

Investigated area in the city of Olten (CH)

- Small town (P: ca. 17’000)
- Only one neighborhood
- Relevant criteria
  - adequate land use mix
  - High percentage of elderly women living alone
  - Acceptance of the local government
Walkability concepts (context)

- Functional approach to walkability
  - Based on traffic and urban planning
  - Well established are the «D»-Variables as measures of the built environment (Ewing/Cervero 2010)
    - Density, Diversity, Design, Destination accessibility, Distance to transit
  - Walkability-Index (i.a. Frank et al. 2010)

→ Reduced focus on functional walking and cycling, no explicit social dimension included

→ A comprehensive approach to walkability is appropriate.
Walkability concepts (context)

- Comprehensive approach to walkability:
  - Pedestrian friendly and well accessible living environment
  - Integrates personal physical activity and leisure time activities
  - Safety situation in traffic as well on park e.g.
  - Social cohesion
  - Places to spend leisure time
  - Esthetics (buildings, places, streets, i.a.)
Framework of neighborhood quality related to walkability (physical activity) and social contact

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<tr>
<th>Dimension</th>
<th>Purpose</th>
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<td>1</td>
<td>Design of footpath network and traffic management</td>
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<td>2</td>
<td>Accessibility of everyday destinations</td>
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<td>3</td>
<td>Design of public space</td>
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<td>Safety</td>
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<td>Esthetics</td>
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MABF-Framework based on walkability concepts from (Pikora et al. 2003; Michael et al. 2009; Gehl 1989; Gehl 2010; Michael/Green/Farquhar 2006; Damyanovic 2013; Flükiger/Leuba 2015; Bucksch/Schneider 2014)
Project Goals

• Development of an adequate survey procedure, analysis and visualization of the neighborhood with regard to the target group of elderly women

• Defining a walkability framework that includes sojourn quality and social resources and respects gender and age-related needs (target group)

• Contribution to the discussion of how cities and neighborhoods can be created that enable both movement and encounter in public space for elderly women
Methods

• Scientific methods:
  • Review of existing literature
  • **Commented walks** (Van Riessen et al. 2013)
  • Focus group
  • **GIS-based analysis** of walkability relevant infrastructure data
Methods

• **Individual** commented walks to analyse subjective perception and individual appraisal of the neighborhood (social space) - (video and sound recording) (Van Riessen et al. 2013)

• qualitative content analysis (Mayring 2010)
Results commented walks:

Method:

• Motivated participation of the target group, good inclusion of the individual perspective (also with mobility barriers, e.g. walking frame/rollator)
• Complex field access (trust building necessary)
• No blind dynamics as with group walks
• Exact restriction of the area of investigation not useful (site-unspecific and general statements)
• Camera / Audio and analysis with video have been proven as an adequate method
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Results commented walks:

**Content-related:**

- Pedestrian crossings / traffic lights having too short green phases
- Shared zone (mixed road use) for target group rather confusing
- Kerbstones especially difficult with walking frame
- Restrictions by building sites
Results commented walks:

Content-related:

• **Seating possibilities must be age-appropriate (with backrest/armrest)**
• **Small shops in the neighborhood are of great importance (shopping nearby & social meeting place)**
• **Emotional bonding to specific places**
• **Avoiding certain places (subjective appraisal of safety important)**
With the eyes of elderly women

GIS-based analysis of infrastructure data

- computing and visualizing micro-indices on walkability along the street network

- walkability attributes: slope, green space, noise pollution, street lighting, bench density, pedestrian friendliness (speed limits, crossing options, network structure, sidewalk presence)
Micro-indices on walkability along the street network

With the eyes of elderly women

Shop accessibility

Micro-indices on walkability along the street network

Shop accessibility
(after closure of corner stores)

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Micro-indices on walkability along the street network

Data Source: Amt für Geoinformation Kanton SO, Werkhof Stadt Olten, Bundesamt für Umwelt BAFU

Integrating quantitative with qualitative data

Integrating data on infrastructure with data from commented walks in combined visualizations

- slope – shop accessibility – safety
- shop closure – shop accessibility – social contact
- Safety needs – street lighting – social contact
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Integrating quantitative and qualitative data

street lighting and safety appraisal

data source: a.en Aare Energie AG
visualization: MABF, HABG, Bleisch/Hollenstein

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**Extended** framework of neighborhood quality related to walkability (physical activity) and social contact

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<td>1 Design footpath network and traffic management</td>
<td>Functional walking/moving</td>
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<td>2 Accessibility of everyday goals</td>
<td>Independence and movement</td>
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<td>3 Design of public space</td>
<td>Enabling appropriation of public space and facilitate social contact</td>
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<td>4 Safety</td>
<td>Subjective and objective safety from accidents and violence</td>
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<tr>
<td>5 Esthetics</td>
<td>Sojourn quality</td>
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<tr>
<td>6 Emotional bonding</td>
<td>Visit/walk to specific places to evoke good memories</td>
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<td>7 Social structure, demographic trend</td>
<td>Living in socially diverse neighborhood</td>
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References


Uchino, B. N., K. Bowen, M. Carlisle, und W. Birmingham. „Psychological pathways linking social support to health outcomes: a visit with the ‘ghosts’ of research past, present, and future.“ Social Science & Medicine 74, Nr. 7 (2012): 949–957.


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