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REGIERUNGSPRÄSIDIUM STUTTGART



Newsletter

WHO Collaborating Centre for Housing and Health
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Editorial

Housing and the ageing society

In today's ageing society, which sees new visions on health care and the emancipation of older adults, ageing-in-place in combination with a sufficient amount of professional home care is commonly promoted as a strategy for maintaining autonomy, independence, sense of identity, and well-being, as well as for maximising financial resources. Research shows that living at home supports personal notions of normalcy and continuity in self-identity in view of the disruptive effects of age-related declines, chronic illness, and multiple personal losses. The wish to remain living independently, regardless of the condition of housing, neighbourhood, and health, is often a personal choice of older adults themselves, but is influenced by someone's health status or that of a partner, as well as the ability of the partner to cope with the burden of care posed upon him or her. On the individual level, this desire leads to home modifications, moving, or simply living under less favourable conditions. Older adults do not comprise a homogenous population, particularly in terms of lifestyle and health status. The majority of older adults lead a healthy and active lifestyle. These are mostly older adults in the fourth stage of life. Health problems vary in severity and mix, and tend to increase with ageing when older adults reach the fifth stage of life. These have a great impact on the type of living environment that suits one best. Although the majority of older people ages-in-place, a smaller group of older people live in institutional settings, such as nursing homes.

It sounds obvious that not every older person has the same needs in terms of housing. In contrast, the majority of solutions offered often only address, or anticipate, declined mobility, and in limited cases low vision. Building single-level apartments and applying contrasts to the

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home is simply not enough. The creation of storage spaces for mobility scooters and bathrooms that provide access with a walker, and replacing dangerous squat toilets in Mediterranean countries are often seen as luxury. The need for other building features emerge for older people with COPD, limitations to hearing, dementia, and rheumatoid arthritis, to name a few. These needs go far beyond the paradigms of healthy buildings and accessible architecture. In the field of building physics and building services engineering, the possibilities are much larger than just the creation of healthy indoor environments, which in itself prove useful even at a high age! Special lighting equipment can contribute to improved vision for all older adults, and even improved behaviour and slower cognitive decline among people with dementia. Energy-efficient HVAC-technology can help protect older people against the deleterious effects of heat waves and cold winters; an important trend in a time of ongoing scientific and political debate on climate change. In this light, it is also important to design buildings to give the older, less mobile, population means for shelter against the more numerous natural disasters as floods, and to design for proper 'egressability' in cases of emergency and calamities. Improved ventilation and indoor air quality, for instance, by automated windows and ventilation systems, may improve the health-related quality of life for older people with COPD. Surveillance systems and other home automation are becoming an integral part of the

homes of older people. Our homes are becoming increasingly intelligent.

Research in the field of ageing and housing is not easy. Residents differ from each other in uncountable ways, and almost every dwelling is a unique end product of a building process at a certain location that differs in (the density of) interior design. The exact benefits to health are hard to capture in numbers. Measures require a lot of individual fine-tuning. This however does not mean we should not proceed improving our dwellings.



Creating a suitable housing stock for the ageing population is a challenge to all professions, including nursing and health care, architecture and construction, as well as policy makers and managers. This challenge requires true interdisciplinary mentality, which currently poses a limit to large-scale implementation due to a divide between the cultures and languages of both fields of professions. Health care professionals have made a clear choice to work with people and to provide care for them, not to work with technology and do home modifications. For workers in the field of technology, it is vice versa, and empathy for their clients is not among the main topics taught during their curriculum or in continuing-education courses. Policy makers may lack knowledge of both do-

mains. Education is where the magic starts. One of the goals of the Technology@Home Programme at Hogeschool Utrecht, the Netherlands, was to teach building services installers and students of nursing and technology about the needs of older clients that desire more comfort and luxury, or older clients that deal with dementia or COPD, through practical publications and a 'try-out' mock-up dwelling. It is just one of the many initiatives worldwide. It showed that ageing-in-place is not just a matter of technological innovation, but a change in thinking and implementation of current solutions.

For the foreseeable future, the construction industry, and even real estate developers, will come to realise that older people are becoming a larger part of their clientele, and that design needs rethinking. Health care professionals, and health care clients, will come to realise that a modified technological living environment will help people age-in-place and live in healthy conditions. If our professionals are not able to bridge the gaps between them and speed up their transition, the ever emancipating group of older people might be able to reach them a helping hand.

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Literature

In this section we will provide a collection of recent housing and health publications from a variety of backgrounds. Literature that is published in German and French, respectively, is indicated with the German flag  and the French flag .

If you have suggestions for interesting journals that we should screen for the literature collection, please let us know!

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Allergies and Respiratory Diseases

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J Allergy Clin Immunol. 2008 Aug 31.

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J Allergy Clin Immunol. 2008 Aug 27.

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Allergen avoidance.
Curr Allergy Asthma Rep. 2008 Apr;8(2):126-32. Review.

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Characterization of folded recombinant Der p 5, a potential diagnostic marker allergen for house dust mite allergy.

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Event Announcements

In this section we will inform you about upcoming events with relevance to housing and health. If you know of any international event, please let us know!

20th Conference of the International Society for Environmental Epidemiology

Date: October 12 - 16, 2008

Venue: Pasadena, California, USA

Further Information: <http://secure.awma.org/events/isee-isea/>

BWEA30 - London (Renewable Energy Conference)

Date: October 21 - 23, 2008

Venue: London, UK

Further Information: <http://www.bwea30.com/conference.html>

XXXVI IAHS World Congress on Housing Science

Date: November 3 - 7, 2008

Venue: Kolkata, India

Further Information: <http://www.housingscience2008.in/index.php>

16th European Conference on Public Health

Date: November 6 - 8, 2008

Venue: Lisbon, Portugal

Further Information: <http://www.healthinnovation2008.com.pt/site.asp?ID=1&IDIOMA=2>

ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers)
Winter Conference

Date: January 24 - 28, 2009

Venue: Chicago, USA

Further Information: <http://www.ashrae.org/events/page/1925>

4th Biennial Partnership Forum

Date: March 23 - 28, 2009

Venue: Kampala, Uganda

Further Information: <http://www.pciaonline.org>

7th International Conference on Air Quality

Date: March 24 - 27, 2009

Venue: Istanbul, Turkey

Further Information: <http://www.airqualityconference.org/>

Approaches to Managing Mold in Buildings

Date: April 27 - 29, 2009

Venue: Orlando, Florida, USA

Further Information: <http://www.utulsa.edu/iaqprogram/TulsaMoldFlyer.pdf>

12th World Public Health Congress

Date: April 27 - May 1, 2009

Venue: Istanbul, Turkey

Further Information: <http://www.worldpublichealth2009.org/>

ROOMVENT 2009 - Air Distribution in Rooms

Date: May 25 - 27, 2009

Venue: Busan, South Korea

Further Information: <http://www.roomvent2009.org/eng/roomvent2009/invitation.asp>

International Green Roof Congress

Date: May 25 - 27, 2009

Venue: Nürtingen, Germany

Further Information: <http://www.greenroofworld.com/>**The 5th International Workshop on Energy and Environment of Residential Buildings and the 3rd International Conference on Built Environment and Public Health**

Date: May 29 - 31, 2009

Venue: Guilin, Guangxi, China

Further Information: <http://www.chinahvacr.com/eerb/>**ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers)**

Annual Conference

Date: June 20 - 24, 2009

Venue: Louisville, Kentucky, USA

Further Information: <http://www.ashrae.org/events/page/1919>**Healthy Buildings 2009**

Date: September 13 - 17, 2009

Venue: Syracuse, New York, USA

Further Information: <http://www.hb2009.com/>**3. Jahrestagung der Gesellschaft für Hygiene, Umwelt-und Präventivmedizin:**

Gesundheit, Umwelt und Wohnen

Date: October 8 - 10, 2009

Venue: Stuttgart, Germany

Further Information: <http://www.ghup.de/congress/index.html>

Message Board

In this section we will inform you about activities and projects related to housing and health that are being carried out by WHO or the WHO-CC. This may relate to ongoing activities and projects, as well as invitations to participate in data collections or case study projects.

WHO work and publications on housing and indoor environments

Damp and mould in homes are not only a key threat to healthy housing, but represent an increasing problem for many cities and countries. The WHO Bonn office, supported by the European Commission, therefore addressed this problem by undertaking a review of interventions against damp and mould to collect the currently available knowledge on technical solutions. The report on a WHO expert meeting on interventions to reduce health effects from damp and mould (held in February 2008 in Bonn, Germany) is now available for download from

http://www.euro.who.int/Housing/support/20080403_3 .

The second meeting of the WHO/EC project on policy implications of interventions against damp and mould will be held in February 2009 in Bonn, and will focus on the review of actions and policies against damp and mould. Main outcomes will be a list of policy briefs on sound technical action against damp and mould.

The WHO work on the **Indoor Air Quality Guidelines** has now initiated the development of guidelines for selected air pollutants, such as radon, carbon monoxide, nitrogen dioxide, formaldehyde, particulate matter and some other pollutants. For the full list of pollutants addressed, please visit http://www.euro.who.int/air/activities/20070510_2 . A meeting to review the background documents on the selected pollutants will be held in spring 2009 to discuss and recommend the respective guidelines.

The report with the recommendations for the IAQ guidelines on damp and mould is available at <http://www.euro.who.int/Document/E91146.pdf>.

The final **Night Noise Guidelines (NNGL) for Europe** project report is posted on the EU site http://ec.europa.eu/health/ph_projects/2003/action3/action3_2003_08_en.htm#1
http://ec.europa.eu/health/ph_projects/2003/action3/docs/2003_08_frep_en.pdf

This report will also be published as WHO publication and posted on the World Wide Web of the WHO.

The 319-page report includes an introduction, and sections on project activities conducted, partners and countries involved, achievement of the objectives, appendices, and results. The results sections include a summary of night noise guidelines for Europe (including an introduction, process of developing guidelines, noise indicators, sleep time, the relationship between noise and sleep and health, vulnerable groups, thresholds for observed effects, and recommendations for health protection), the unedited final document of Night Noise Guidelines for Europe, and a technical report on the night weighting factors.

Housing renewal and thermal insulation measures are a current trend in building management to reduce the energy cost of the housing stock. However, little is known on the health impacts of such actions which aim at an increased thermal comfort and less expenses, but also tighten the buildings and potentially reduce air exchange. The WHO Bonn office has addressed this concern by a monitoring project of thermal insulation undertaken in a German city, and found that housing interventions are not in conflict with the health of the residents but that some risk factors and susceptible groups need to be specifically considered. The report of the preliminary findings of the intervention project is accessible at http://www.euro.who.int/Housing/evidence/20080327_3.

WHO work on ageing in cities

To prepare cities to address their ageing populations, the WHO HQ has launched a network of "Age-friendly cities" which share and discuss mechanisms and policies to adapt their cities and make them more useful and accessible for the older residents. Key features of the project and experiences of the network can be found under http://www.who.int/ageing/age_friendly_cities/en/index.html.

WHO report on Social Determinants published

The Commission on Social Determinants of Health (CSDH) supports countries and global health partners to address the social factors leading to ill health and inequities. It draws the attention of society to the social determinants of health that are known to be among the worst causes of poor health and inequalities between and within countries. The determinants include unemployment, unsafe workplaces, urban slums and living conditions, globalization and lack of access to health systems. A final report, summarizing the work of several knowledge networks, has now been published at http://whqlibdoc.who.int/publications/2008/9789241563703_eng.pdf

WHO announces its second Collaborating Centre on Housing

In July 2008, the School of Law (University of Warwick, UK) was designated as WHO Collaborating Centre for Housing Standards and Health. The work of the Collaborating Centre will especially address the legal and regulatory framework of healthy housing, and focus on the safety of housing conditions to prevent injuries and fatalities. More information can be found at http://www2.warwick.ac.uk/newsandevents/news/warwick_law_school/.

Housing and Age in Baden-Württemberg, Southwest Germany

Within the framework of the health reports of the state of Baden-Württemberg the State Health office edited a report about ageing and health. The first part was published in November 2003 and dealt with the topics nutrition, vaccination and exercise. The second part, published in November 2006, addressed demographic basics, as well as physical, mental and social indicators of health, disease, ageing and dying. It also includes a chapter about habitation and age, which the WHO-CC for Hous-

ing and Health has translated into English. The translated chapter can be downloaded from <http://www.gesundheitsamt-bw.de>.

The whole report (German only) can be downloaded from <http://www.gesundheitsamt-bw.de/servlet/PB/menu/1204311/index.html?ROOT=1133583>.

Next Edition of the Housing and Health Newsletter

In the 4th edition of our Housing and Health Newsletter we will focus on Allergies and Respiratory Diseases. If you are interested to make a contribution to our Newsletter on the topics of housing and allergies and respiratory diseases, respectively, please contact Iris Kompauer at the WHO-CC for Housing and Health (email: iriskompauer@rps.bwl.de).

Miscellaneous

Building Standards for Old People's Homes – Legal Regulation is not all.

In Germany, minimum standards for the construction and equipment of old people's home are currently under discussion. The reason for this situation is a revision of laws for regulatory supervision of homes in the Federal States of Germany, which was necessary for adaptation to the changed requirements in the placement and care of the elderly and disabled people. An important task in this process is to open new possibilities for a mixed cohabitation of people with special needs and other people, to establish the chance for the participation of home residents in the social environment, and to integrate the domiciliary care into the normal life.

As a consequence of deregulation, the legal requirements will be restricted to the most important aspects such as fire prevention, minimum size of the rooms, equipment of sanitary installation, and accessibility. The adequate definition of minimum standards is not an easy task, because there is an enormous cost pressure in the care of the elderly in our ageing society. The demand of an increase of the minimum size for single rooms from 12 to 16 m², for example, will not easily to achieve.

However, the restriction of legal requirement to the essentials should not neglect other aspects, which are also important in the construction of old people's home. Despite the fact, that they are not fixed regulatory, their consideration will be useful to get a satisfactory situation. One important topic is the integration of the people's home in a functioning urban environment. The construction of a barrier-free building amidst a heavy traffic quarter will not permit the participation of the residents in social life. Also old people should get the chance to go for a walk without circumstances, in order to sustain their mobility. A good accessibility of the local facilities and utilities will motivate the elderly to take part in social life.

As a consequence of climate change and increasing temperatures predominantly in the centres of the towns, the adequate thermal insulation of old people's home is an essential preventive measure. In 2003, the heat wave led to an excess mortality particularly in the city centres. Therefore, the consideration of the microclimate and the conservation of green places in the environment of old people's home are very important. An intelligent design of the buildings can shade the facades during the summer time. This should be kept in mind at the planning stage of a building.

For reasons of precaution, apart from the minimum standards, the home-builders should get also information and recommendations to realise a meaningful and worth living home and home environment for the elderly. This may be a rewarding task for the cooperation of city planners, architects and public health officers.

Dr. Bernhard Link

Leader of the WHO-CC for Housing and Health

Speaker's corner

In this section we will publish invited contributions from experts within the housing and health field, aiming at a specific topic and reflecting about the current evidence and its policy implications.

The Home Environment is as a Major Context for Health and Functioning in Later Life – But Differentiation is Needed as Well

Hans-Werner Wahl & Frank Oswald

Department of Psychological Aging Research, Institute of Psychology, University of Heidelberg

Background

The role of the home environment for maintaining and improving the health and daily function of older adults is now widely recognized in research and practice. Social medicine research has pointed to factors related to housing conditions such as mould, too high / low temperature as well noise, which are able to elicit or exacerbate acute and chronic disease, and even provoke excess mortality (Oswald & Wahl, 2004). In the field of psychology of aging, there is a long tradition of linking excessive “environmental press” with loss of functioning and disability. Similarly, geriatric medicine, occupational therapy, and rehabilitation research have also emphasized the home environment as a critical objective factor supporting or undermining individual functioning. In sum, quality of life in old age can be expected to substantially rely on the home based person-environment interface as people age (Wahl, Mollenkopf, Oswald, & Claus, 2007).

On-going evaluation of the role of the home environment in health and disablement processes also continues to be an important public health concern in order to inform interventions and health policy. This is particularly the case given that the majority of older adults live in private households with those beyond the age of 80 years spending most of their time in the home or immediate surroundings. Also, older adults prefer to “age in place” as long as possible. Moreover, recent population-based studies suggest that gains in functioning in older adults over the past few decades may be attributable in part to the improvement in housing and infra-structural conditions.

Current Research in Germany: The Example of the Department of Psychological Aging Research at the Institute of Psychology of the University of Heidelberg

Since about ten years, the Department of Psychological Aging Research (chaired by Prof. Dr. Hans-Werner Wahl) aims to better understand the role of the person-physical and spatial interface as people age. In particular, we strive to learn, how person-environment constellations are linked with major quality of life outcomes in old age such as autonomous functioning, well-being, and depression. A major conceptual component is that the combination of measures targeting the objective as well as the more subjective and experiential sphere of person-environment interactions in the later years is a fundamental research need. Also, linkages between the arrays of housing (both private housing and institutional settings), infrastructure, and technology are seen as an important prerequisite to approach the aging person-environment system in a as comprehensive as possible perspective.

Key research projects include

the [ENABLE-AGE Study](http://www.psychologie.uni-heidelberg.de/ae/apa/forschung/projekte/enable.html)

( <http://www.psychologie.uni-heidelberg.de/ae/apa/forschung/projekte/enable.html>),

the BETAGT project

( <http://www.psychologie.uni-heidelberg.de/ae/apa/forschung/projekte/betagt.html>),

and

the INSEL project

( <http://www.psychologie.uni-heidelberg.de/ae/apa/forschung/projekte/insel.html>).

Recent Findings

The existing evidence on the relationship between the home environment and disability-related has recently underwent a rigorous literature review by the Department of Psychological Aging Research in cooperation with Swedish and North American researchers (Wahl, Fänge, Oswald, Gitlin, & Iwarsson, in press). Two research questions were focused:

1. What is the recent evidence supporting a relationship between home environments and disability-related outcomes?
2. What is the recent evidence regarding the effects of home modifications on disability-related outcomes?

Using computerized and manual search, we identified relevant peer reviewed original publications and review papers published between January 1, 1997 and August 31, 2006. For research question 1, 25 original investigations and for research question 2, 29 original investigations and 10 review papers were identified. Regarding research question 1, we found that evidence for a relationship between home environments and disability-related outcomes for older adults exists, but is limited by cross-sectional designs and poor research quality. For research question 2, evidence based on randomized controlled trials shows that improving home environments enhances functional ability outcomes, whereas the evidence the better home environments impact on falls-related outcomes is weak as well as inconsistent.

Going further, the European project [ENABLE-AGE](#) with its first data wave collected between 2002-2004 was aimed to explore the home environment as a determinant for healthy ageing in very old age in Germany, Sweden, the UK, Hungary, and Latvia, based on the broadest assessment of the person-environment relations in the home environment, both objectively and subjectively, probably ever conducted. The findings underscore that participants living in better accessible homes, who perceive their home as meaningful and useful, and who think that external influences are not responsible for their housing situation were more independent in daily activities and had a better sense of well-being. In particular, it was not the number of environmental barriers in the home environment, but the magnitude of accessibility problems that was substantially related to different aspects of healthy aging. Moreover, these results applied rather consistently to all five national samples (Oswald, Wahl, Schilling, Nygren et al., 2007).

Conclusion

Considerable evidence exists which supports the role of home environments in the disablement process, but there are also inconsistencies in findings across studies. The findings of the [ENABLE-AGE](#) Project can widen the perspective when striving for barrier-free building standards to encompass a holistic approach that takes both processes of objective and subjective interrelations with the home environment into account. There is a major need to better transfer the increasingly robust evidence in the area of environmental gerontology to practical settings.

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