HEALTHCARE IN HOUSING – SPACE AND ORGANISATION

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ABSTRACT

The background is the great challenge in a rapidly increasing aging population. In many European countries, elderly persons will stay in their own homes as long as possible. This fact puts housing-areas under special constrains. Collaboration between different community sectors is needed. The area is of huge importance for local communities, responsible for the well-fare of elderly persons.

The aim of this project is to find, design and discuss solutions within built areas of housing, when homes also are workplaces. This project is in an early phase of deepening the research questions and establishing collaboration between disciplines, why main results not yet exist.

Method in this qualitative research is use of multiple tactics: Interviews, Questionnaire survey, Observations and evaluations of authentic processes of changes as well as Briefs and Design-projects made by master-students. The project is also part of the recently formed Research-centre Ageing-Wellfare in Sweden.

KEYWORDS: elderly, housing, space-management, usability.

INTRODUCTION

The purpose of this paper is to introduce a research-area where private homes of elderly persons will more and more at the same time become a workplace for personnel in care and healthcare. Initially the paper gives a background, presenting the challenge of the new demographic situation. Its consequences on space and organisation will follow and after that a description of the research method that will be applied. Finally there is a short presentation of ongoing work so far.

The population of elderly persons is increasing rapidly in Sweden as in most European countries. In the last hundred years the mean-age of the whole population of Sweden has increased by 25 years, and in the last 20 years the number of persons with an age over 90 years has become three times larger (Göteborgs stad, 2006). The normal age for retirement in Sweden is 65 years. In the next 10 years the number of retired persons will be highly increased, as unusually many Swedes were born after the second world-ware; the generation born 1945 – 1954 is sometimes called the “record-generation”.

New situation - Staying at home

Housing for elderly has also been a subject of research for many years and is fairly well examined and documented by researchers both internationally (Regnier, 2002) and considering a national Swedish context (Paulsson, 2002).

What is new today is the situation that even though the amount of elderly in Sweden, as well as in most European countries is increasing, building of specific housing for elderly is no longer enough. The society does not have the possibility to build or to run such facilities to meet the needs of care from the elderly. In many European countries, elderly persons will
stay in their own homes as long as possible. In Sweden there is a governmental strategy saying that staying in your own home always shall be the first alternative for elderly persons (SOU 2003:91).

In healthcare there is a trend towards only highly qualified treatments and short stays in a few, large hospitals and more of the low-qualified healthcare delivered near the patients, in their own homes or in smaller hospitals near housing-areas. (Vårdbygggnadsforum, 2005)

**Higher demands**

The elderly in the coming decades will also have higher demands on the spaces where they are going to live their every-day life, than the elderly of today. Many of them have had or still have high positions in their working-life, and have got good recourses to arrange for a good life of retirement, on which they will have high demands of quality. But there will of course also be a lot of elderly persons with none or poor recourses, who will need housing and service. Both persons with good recourses and persons with small financial recourses, will contribute to put housing-areas as well as the buildings of housing under special constrains.

Important aspects for elderly persons in the built environment are regarded to be Accessibility, and possibility to Orientate. Aspects of accessibility of different kinds have been identified and are important parts in the education of architects in many European countries (Paulsson, 2006). Still many problems remains concerning accessibility and possibilities to orientate in society and in housing. Dysfunctions related to a normal aging are quite well known and described (Wijk, 2004). Concerning persons with dementia, results from research on the physical environments, show that they need housing with specific characteristics such as distinct markings for functions (Andersson, 2005).

**Home modification**

In Sweden you can as an elderly person apply for not only aids but also adjustments or modification of your home to improve your mobility and accessibility. A recent report (Lindahl & Arman, 2006) shows that the value of home modifications for elderly made in Gothenburg are improved movements both within the private home and in and out of the home. Improvements were also showed in personal care in bathrooms.

The process of home modifications is increasingly expensive and costs has to be taken into consideration not only for the adjustment but also for the removal of adjustment so the next tenant can be able to live without modifications in their home. A study of home modification made by two master-students, points out that a changing of strategy towards better housing standard instead of home modification will improve the possibilities for the principle of elderly staying in their homes to succeed (Jansson & Taheri, 2005). In 2006 architectural students got the possibility to make observation of the visual results of home modifications, and they reported lack of aesthetical considerations in the way that the adjustments were done. Many adjustments made the private homes look like an institutional living.

Gothenburg Municipality now starts a survey of the planning-process of new housing-areas regarding the needs for elderly to be able to stay in their own homes in general housing areas. Not only indoor aspects are regarded, but also the location of communications and service. Pilot-studies has started in three districts with structure of income, social factors etc (www.vartgoteborg.se)
Quality in housing

Most aspects of quality in housing are general for persons of all ages, such as conditions of light, indoor-climate, possibilities of outlooks and overview, bathroom near bedrooms, a social context and space to interact with your neighbours; to meet others and to be seen by others. Some aspects, though, are more connected to the specific situation of being elderly and in need for assistance from other persons.

The storage of both aids and materials is a huge problem. Space is needed to put wheelchairs, mobility scooters etc when they are not used, and many elderly needs diapers and other disposable articles that need to be stored. When care and healthcare has to be delivered within persons private homes, the need for storage will increase.

A lot of compromises have to be done in the combination of needs from the living, elderly persons and the needs from personnel working in the sectors of care – homecare and healthcare. Some of the living persons needs are practical, such as accessibility and the possibilities to orientate, to be able to come outside and to have space enough. Even if such needs are not always fully satisfied, they are easy to formulate. But needs related to your personal integrity is not always easy to even formulate.

We already have the situation today where the same space shall be usable for different purposes; a home is at the same time someone else’s workplace. But this situation will increase with the elderly population in the years coming. If the single housing apartment shall continue to be a good home, we have to consider the questions of personal integrity. An elderly man, who has been having home care for ten years formulates the problem in a magazine: “To have persons you do not know in your own home all the time – you will never get used to it!” (Samspel, p. 12) Can changes in the use of different rooms in the apartment make that more respect is taken to privacy and personal integrity? Can new kind of mobile screens be used to create easily removable borders between a private sphere and the working space? Probably a whole range of interior artefacts and arrangements have to be created to suit different personal needs.

Housing as Work-space

This area involves several different occupations such as nurses, physicians, as well as care-and homecare-personnel and caretakers in Housing companies. Jobs in the sectors of care are, at least in Sweden, regarded as low-status jobs. Technical innovations in IT, new, intelligent materials etc may lower the need for care, but still there will be an important need for meetings with a real person. The visit of the care personnel is in many cases the only human contact the elderly will get. If we want qualified personnel in the future, the status has to be raised principally by better salary. But better working-conditions can contribute and architects can by a careful design arrange better physical working-conditions for those employed.

Many needs of the personnel are also practical, such as for avoiding heavy lifts for example. Aids for these purposes already exist. There also have to be enough space in for example corridors and bathrooms so they can give the elderly the required assistance all over the apartment.

But an important aspect in establishing well-functioning working-space for the personnel in homecare and healthcare is to arrange workspace outside the private homes; in the housing-
areas. Then I mean such work-space that in general is regarded as most basic, for example changing-rooms, showers and space for meetings and for lunch. So it is not only from the perspective of housing, but also from the perspective of workspace, that aspects of functionality and usability have to be applied.

PURPOSE

This study concerns living-conditions for elderly persons within the ordinary stock of housing and housing-areas that also are offering good working-facilities and include aesthetical aspects. The purpose of this study is to explore, design, discuss and analyze such units, both in existing areas of the city Gothenburg and new suggestions for design of housing and housing-areas.

Some related research-questions are: How do new and different degrees of services influence the building and the building-process? What kind of spaces for other facilities than housing will be needed? What are the possibilities for combinations of different activities in the same facilities?

METHOD

The research-problem is complex and a combination of methods will be needed. A Qualitative method will be applied, as it will correspond to the material, which is of mostly qualitative character and will allow broad understanding of situations (Alvesson & Deetz, 2000). In architectural research the qualitative method has the characteristics of Emphasis on natural settings, Focus on interpretation and meaning and the Use of multiple tactics (Groat & Wang, 2002).

The participation of – and dialogue with - many related parts into the process of knowledge and research is essential. Examples of these related parts are Governmental departments such as planning offices, Real-estate companies, housing companies, traffic-planners and of course the elderly persons themselves – the part that are most dependent of the effects from both lack of improvements and upcoming innovative solutions.

This will be done by some of the following tactics: Meetings – to introduce the question, a Questionnaire survey, Interviews – semi-structured interviews with stakeholders and Workshops where persons with different competences take part.

Other working-methods that can be used in the project are: Part-taking observations – in housing-areas and in private homes and Full-scale experiment – a new Laboratory for Care offers the possibilities for testing measures and innovations in the interior of housing.

Evaluation will be made of authentic, ongoing processes of changes in built environment and/or organisation. A pilot-project has recently been formed in the Municipality of Göteborg for improving efforts for the elderly by cooperation between different kinds of care and services. One method will be to follow this project will be observed and its results will be evaluated on usability of the architecture and built environment.

Also processes of authentic programming/construction briefing may be evaluated. This method will be used if any situation will occur, as actual research tells that the opportunities
to influence the outcome and to introduce alternatives in design are higher in the earliest stages of a construction process (Ryd, 2003).

**Delimitation**

The problems of elderly persons staying in their ordinary homes are widely regarded most complex research-areas, containing questions concerning several different competences. The aspects of the built environment, the architecture, including organisation of space, are in focus and therefore some exclusions have to be done. Questions of public transports and traffic-systems as well as management and organisation of services will not be in the centre of this architectural study, even though aspects of these questions will be parts of the background and regarded as such in the study.

**Empirical materials**

Empirical materials of this study will be the results of interviews and questionnaire, the documentation of part-taking-observations, in written material and photos, results from full-scale experiments and from design-exercises. Answers from participants will be expressed as experienced effects or estimated values of realized efforts and changes, and suggestions of new solutions.

One way of structuring the empirical material and results, is to use typology of buildings for housing. Types of layout for housing areas can be used, such as yards surrounded by buildings, or buildings lying free in a park or landscape. Another typology is emanating from layout of different spaces/rooms within the single unit (Nylander, 2007). The following five plans are often used in housing design of today in Sweden: One big room in the centre, all installation and technique located together, organized around a neutral hall, divided in three parts with secondary space in the middle and the zone-plan with division between public and private zones.

The type of building that was most common in European cities before 1960 is Multi-purpose building (Malmqvist, 1992). In this type of building the ground-floor contains space for other purposes such as shops, while the floors above, contains housing apartments. Many housing blocks and housing areas still have Multi-purpose buildings. These ground-floors offer specific possibilities to include services, care-units, day-centres and almost whatever may be of interest for the elderly living in the actual building or in the neighbourhood. Outgoing the most frequent types of buildings for multifamily housing existing in Sweden, an investigation will be done of the possibilities to secure or to increase qualities for elderly persons.

**International and multidisciplinary cooperation**

An International network is offered in the research-network FM in healthcare in Europe, which will give opportunities to discuss results and actions of care and services between many European countries. The project is also part of the recently formed National Research-centre Aging-Wellfare in Sweden, which offers possibilities for multidisciplinary collaboration.

**Ways to spread results**

Questions that are raised in this project is of huge importance for local communities, responsible for the well-fare of elderly persons in for example Sweden. There is a need for
not only knowledge but also new ideas and suggestions for solutions among the municipal and also governmental institutions in Sweden. The cooperation with departments of municipality of Göteborg will help to spread the results of the study. The national research-network Aging -Wellfare will also contribute with all its connections in the society.

A specific task will be to make younger professionals such as planners and architects aware of constrains and possibilities of the increasing elderly concerning urban planning and architecture. This was started last study-year in the international Master-program Space for Healthcare, Housing & Work at the School of Architecture, Chalmers University of Technology.

**ONGOING RESEARCH ACTIVITIES**

The project is still in its early phase of refining the research questions and establishing collaboration between disciplines. Results expected from this study will be new knowledge of how to manage constrains in built environment of the increasing elderly population. It is the intention that it will be realised in:

- A detailed picture of the situation and of constrains concerning living-conditions for elderly in the normal housing areas in Sweden in general and in Gothenburg in specific.

- Good examples of solutions to problems in existing buildings and in housing areas.

- New design of buildings for housing and housing areas with high aesthetical qualities, where elderly can live a safe and comfortable life until the end and the functionality and usability also as workplaces has been taken into consideration.

**Evaluation of design-projects**

The fact that architecture is a making profession makes it possible to among other empirical material use design-projects. Processes of knowledge-creation and research have similarities with processes of design (Groat & Wang, 2002). Analysis of the process of design and evaluation of results in innovations and suggestions in design-projects, gives a concretion to other kinds of empirical material. The results on a hands-on-level from design-exercises made by students in the international Master-program Space for Healthcare, Housing & Work at Chalmers University of Technology, will be explored. Analysis of design-projects from two study-years has now started, where one of the important aspects is the double-perspective of space for living and for working.

**Workshops with senior persons**

The aim of this smaller project is to investigate the needs for new or further developed products and services concerning physical environments, transports and information- and communication-technology, which are needed for elderly persons to be able to stay in their own homes and have an active life. The method used is to collaborate with Chalmers Senior Association. These persons have both their competence as former professors, teachers etc and the competence of being old. We use several tactics such as a questionnaire, studies of literature and workshops.

The result of the project is still in work: A mapping of needs for new or developed products and services needed for elderly possibilities to live a qualitative and active life. But some
general results are already obvious: There is more need for services of different kind than for products. Large needs were found for improvement of the organisation of social services and healthcare. Elderly persons still want to take part in some kind of social context, and therefore spaces for common use are needed.

REFERENCES

Books


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Others

Conference:
Vårdbyggnadsforum. (2005), Höstkonferens oktober 2005, Stockholm: Tema Framtiden (Conference at Forum for research on Space for healthcare; Several speakers presented trends in space for healthcare in the future)

**Magazine:**


**Web site:**