

Work Processes and Building Reconstruction at Elderly Care

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ABSTRACT

Background and aim – A Dutch healthcare organisation modernizes its real estate portfolio to meet today's requirements and acquired an office building for conversion into a nursing home for elderly with dementia. The purpose of the research has been to study the design principles for elderly with dementia, for innovative and smart application in work processes and the acquired building.

Methods – Using multiple-method qualitative research design, bachelor thesis students of a university of applied sciences explored the reconstruction of the acquired building and related healthcare processes.

Results – Application of design principles for the elderly with dementia were studied, among which were interior design, catering process, and connection with the neighbourhood. Feasible interior ideas were elaborated, intentions for change in the catering process were confirmed by stakeholders, and an action plan for neighbourhood connections was delivered. Elements are being used for a final design. Implementation has to be checked with close scrutiny.

Originality – The application of design principles for elderly with dementia (design, favourable state, beautiful moments) together with changes in work processes of health care employees aiming at patient-centred care is a new combination.

Practical or social implications – When a healthcare organisation chooses a new care concept, not only the surroundings change. Also, the processes around people and the way we take care of them change. In many ways a new concept can only succeed when the employees and the way they work change as well.

Type of paper – Research paper.

KEYWORDS

Building reconstruction, elderly with dementia, healthcare processes, patient-centred care.

INTRODUCTION

Staff shortages and costs in the healthcare industry continue to create challenges for resource allocation (SIA, 2018; WHO, 2019). A healthcare organisation in North Netherlands is realigning its' real estate portfolio, and replacing old buildings that no longer meet contemporary requirements with up-to-date accommodation. At the same time, the opportunity has been taken to examine work processes. It would be two birds with one stone if these new work processes could be done more efficiently in a building that is refurbished, adaptable to changes, and more effective for a better quality of life (QoL). The studied healthcare organisation serves 15,054 clients, of which 8,325 residential, and employs 5,943 employees, of which 4,178 at 27 residential care locations (KwadrantGroep, 2019a). The healthcare organisation acquired a governmental office building in the centre of a rural village with 2,900 inhabitants (CBS, 2019) and is planning to reconstruct this building into a nursing home for 30 elderly with dementia.

The traditional form of nursing home care delivery, with assigned care providers which are allocated to a closed unit with a common living room, will change. For instance, in several themed areas with different atmospheres and activities. Patient-centred care in the refurbished building will allow residents to enjoy the day in a way that suits their individual needs (KwadrantGroep, 2019b). The preceding changes of the living environment are inextricably interwoven with employee work processes

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and patient contacts. This also implies that employee policy principles need to be revised, including mobility and training (KwadrantGroep, 2019b). The healthcare organisation expects transformation of traditional nursing homes into patient-centred care with inclusive or generational living. The focus of the healthcare organisation is on improving QoL for residents. Contribution of the design of a living space is presupposed. The aim of the study is to gain insights into the interaction between patients, employees, and the refurbished building.

LITERATURE

The proposed patient-centred healthcare concept is based on the principles of environment for elderly with dementia developed by geriatrician Anneke van der Plaats (Van der Plaats & De Boer, 2014; Verbaeck & Van der Plaats, 2008) and widely supported in the Netherlands. These principles are design for elderly with dementia, a favourable state, and beautiful moments (Verkerk, Van Hoof, Aarts, De Koning, & Van der Plaats, 2018). Moreover, Verkerk et al. (2018) studied four cases where traditional settings were transformed in alignment with these principles. In a news broadcast from a nursing home, Van der Plaats said:

“The brain in all brain patients is completely dependent on the environment. So, a favourable environment gives favourable behaviour. And an unfavourable environment gives unfavourable behaviour. That’s the base.” [translated] (Nieuwsuur, 10 July 2019).

Unfortunately, she was admitted to a nursing home herself as she was diagnosed with dementia. The subject of her work and studies. Fortunately, the home met the aforementioned principles. Other research indicated that group residents needed less help with everyday activities and were more socially involved (Te Boekhorst, Depla, De Lange, Pot, & Eefsting, 2009). Employees indicated that they need time and more staffing to enable better care delivery (Van Hoof et al., 2016).

METHODS

Bachelor thesis students and interns performed multiple method research (Denzin & Lincoln, 1994; Saunders, Lewis, & Thornhill, 2009) at a Dutch healthcare organisation. They studied the application of factors of Verkerk’s design principles for elderly with dementia (et al., 2018). Methods and samples are shown in Table 1.

Table 1 Methods and Sample.

Aspects	Researchers	Methods	Sample
Entrance	2 Real Estate (RE) bachelors	Phenomenological research	5 locations
Garden	Facility Management (FM) bachelor	Phenomenological research	5 locations
		Semi-structured interviews	3 employees, 2 headmasters, 2 experts
Catering	FM bachelor	Semi-structured interviews	2 relatives of a resident, 4 employees, 4 experts, 2 managers
Labour conditions	Part-time bachelor Law	Semi-structured interviews	2 employees, 3 staff advisors, 2 managers
Interior	Arts bachelor	Phenomenological research, expert interviews and design	Various locations, 3 experts
Connection w/neighbor.	2 Social Work & 3 RE bachelors	Phenomenological research, design research	4 locations, 3 participating organisations

The studies were conducted in two consecutive semesters in 2018 and 2019. In both semesters, individual students and student project groups from different disciplines examined different factors of the research assignment. The factors were chosen by the students and aligned in consultation with the staff of the healthcare organisation and university. The methods used were field and expert interviews, design research, and phenomenology executed according to Saunders et al. (2009). The students studied the phenomenon by visiting nursing homes and other locations, workshops for dementia, workshops

design research, and phenomenology executed according to Saunders et al. (2009). The students studied the phenomenon by visiting nursing homes and other locations, workshops for dementia, workshops for design experts, interviews with staff, family, and community members, and by conducting design research. All studies were assessed according to the requirements of the students' own curriculum. After finalization of the first semester, the sub-studies were made available, summarized, and presented to the healthcare organisation. Moreover, a follow-up was made in the subsequent semester by a specific inquiry into the connection with the community. This paper may also be regarded as being part of an evaluation of the collaboration, and proceeds with a new student project.

RESULTS

The healthcare organisation intended to implement a completely new care concept. They were aware of the fact that designing health spaces can be extremely challenging, especially when combining this with a new work concept. Not only is design of the spaces important, the way in which people will work in this new concept is also a challenge that must be addressed. The conducted studies helped clarify parts of the health space design or contributed to the processes people will work with in the new concept. Six focal areas were identified in the respective studies: entrance, garden, catering process, labour conditions, interior, and connection with the neighbourhood. The studies by the bachelor thesis students on the entrance, garden, catering and labour conditions were of a descriptive nature, with recommendations. The studies on the interior and the connection with the village have focused on design and practical deployment. The latter resulted in implementation plans.

Entrance

Respondents reported that light and open spaces were experienced as positive and dementia-friendly, which had to be well-arranged, recognizable, and inviting. Space that is busy, modern, business-like, dark, and cluttered was experienced less positive.

Garden

The physical environment, daytime activities by residents, and work processes were examined at the garden. Regarding the physical environment, interviewees reported that safety for residents is the most important aspect for designing a garden. In addition, independent access to the garden is needed. Furthermore, employees suggested that activities of the residents and their own work processes could be shifted towards the garden, allowing for more time to be spent there. In this context, employees reported expected improvements of QoL of residents and of employee satisfaction.

Catering process

Traditionally, nursing homes prepare food by self-cooking. In the proposed concept, self-cooking systems are replaced by pre-prepared food service systems. By doing so, the healthcare organisation reported expectations to improve QoL. For instance, by creating an experience around cooking, more flexibility, and smart use of scent. However, employees and family were used to the fact that self-cooking is the standard. Consequently, the benefits and flexibility of the pre-prepared food service system cannot yet be predicted.

Labour conditions

Document analysis and interviews showed three issues regarding labour conditions: (1) physical workload, including lifting, support stocking work, and lack of workspace, (2) psychological workload, including work stress, staff shortage, self-managing teams, and communication, and (3) inappropriate behaviour, such as misunderstood behaviours of residents.

Interior

Based on three interviews with experts, various site visits and supervision by an art teacher, the following aspects were identified: orientation, characteristic and predictability, use of light and colours, acoustics, senses, seating areas, and views. These aspects were applied in design sketches such as in the following example (Figure 1)⁴.

⁴ For more design sketches, see <https://edu.nl/pyy7m>

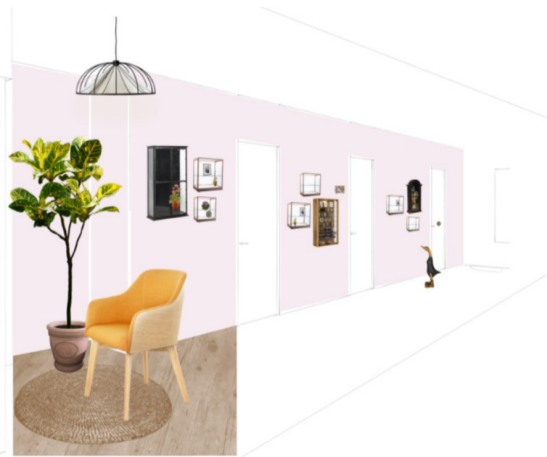


Figure 1 Design for the care of elderly with dementia, sketching i.e. characteristic, use of light and colours, senses, and seating areas.

Connection with the neighbourhood

In line with a Dutch national policy, the municipality is participating in the ‘dementia-friendly municipality’ program. Aiming at a better integration of elderly with dementia in society. The municipality, the studied healthcare organisation, and other social parties encourage citizens to participate in the life of residents. At this particular healthcare organisation previous investigations showed that connection with the neighbourhood could be an important element to improve QoL, and at the same time to reduce workload. Employees of the healthcare organisation can establish a sustainable connection with inhabitants of the village by collaborating with organisations in the same community. Interviews with residents identified three ‘villager’ organisations that actually wanted to collaborate: a care centre for people with disabilities, a kindergarten, and a church. These organisations also aim to make a meaningful contribution for elderly with dementia.

DISCUSSION

The starting point of this research has been to investigate how a living environment can be created for people with dementia, based on the ideas of Van der Plaats & De Boer (2014). In this particular case, the project started with a group of students from various disciplines with the aim to achieve a multidisciplinary result. QoL is a central outcome in care for the elderly with dementia. Changes in interior and creating a connection with the community, for example, seemed to be directly related to QoL. The involved research students were in close contact with the real-life context of people with dementia, were able to talk extensively with healthcare organisation project staff, and finalized their studies with design ideas and a feasible implementation plan. These studies changed the perspective of healthcare organisation project staff and helped sharpen the perspective of how the project will work once it is completed. Other performed studies were also valid, but did not yield any new innovative ideas, nor could they prove the effect on QoL. Nevertheless, the catering study confirmed the refurbishment plans.

Proof of concept and evidence-based design is essential for efficient, effective and patient-centred care. Reconstruction for the elderly with dementia based on the aforementioned principles (i.a. Van der Plaats & De Boer, 2014) will have to take into account work processes and future developments, such as generational living. The research neither rejected or confirmed current project operations and requirements; it has been used for inspiration. Finally, it may be worth mentioning that the initial research question about design principles for elderly with dementia changed into a puzzle. Especially, on how the effects on residents with dementia can be investigated fruitfully and respectfully, while at the same time the environment changes and care is delivered. Additional research will be needed to support these changes. Better insight into the interaction between patients, environment, and employees will contribute to a better QoL and preferably lower healthcare costs. It is for these reasons that long-term research is urgently necessary.

In final thesis projects, students and their degree program supervisors tend to diverge and demarcate.

On the other hand, clients want integrated solutions. Convergence of students from different studies is the challenge for research, practice and education. This is a calling for applied science and better alignment with educational processes.

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Deltapremie

The 'Deltapremie' or Delta Prize is a new leading research prize in the Netherlands focusing on practice-oriented research by professors. The prize is developed for professors who have managed to repeatedly make a special difference with the social impact of their research over the years. It shows where practice and research can come together in an innovative way. Practice-oriented research has acquired a solid place in Dutch society. Almost 700 professors and more than 3,000 teacher-researchers are currently involved. The starting point of the research is always to find solutions for practice-based problems, also by partnering with practice. In this way, practice-oriented research provides applicable solutions to societal challenges.



An independent selection committee selected the winners. The committee consisted of six experts from Erasmus University Rotterdam, Innofest, Delft University of Technology, Netherlands Study Centre for Technology Trends, and the Association of Netherlands Municipalities. In the report the selection committee tributes Mark Mobach and his research group for the impact that they have on the crossroads of various domains from public transport to mental health. Mobach: "We see the prize as enormous encouragement to continue our research into space and organisation in healthcare, education, offices, and cities together with our partners. We extend our research to areas where there are perhaps fewer financial possibilities, such as research with the arts and frailty."

Research focus area

With his research group, Prof. Mobach wants to contribute to the best buildings for people and organisations. He does so by devising better space and services in a multidisciplinary setting together with students, lecturer-researchers, Ph.D.-students, and postdocs. Better spaces and services for education, offices, and even cities that stimulate healthy behaviour, better healthcare buildings that reduce stress, but also prisons and stations that better meet the needs of society.