

Residential housing in the social-spatial context of home-based nursing and care in Austria

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Abstract

Purpose - Given age-related dwindling of physical competencies and the upcoming necessity of home-based nursing care in the home of elderly people, this study shows the spatial and social implications with reference and to the person-environment fit.

Design/methodology/approach - A qualitative approach has been chosen in order to conduct a penetrative single case analysis whose multiplicity permits a socially realistic description of the specific research context. Eleven members of staff from six different care organisations based in Austria were asked about these circumstances within the framework of expert interviews, supported by interview guidelines and recorded with an electronic device. The transcribed interviews were analysed using Qualitative Content Analysis according to Mayring (2008).

Findings - The results emphasise the special significance of the person-environment fit for the context of home-based nursing care for the elderly and the particular demands made on their homes. Facing decreased personal competencies, especially missing barrier-free elements in the dwelling have been criticised. The recommendation of home adaption measures, improvisation and the refusal of the assignment of home-based care belong to the strategies the research group undergoes in view of unsuitable edificial features. Furthermore, the results show an enhancement of the person-environment fit. Besides proving room for living, the dwelling has to fulfil further functions because becomes the epicentre for the provision of home-based care. The results illustrate that attention should be directed on the private and individual context of the person and his dwelling.

Originality/value - The study at hand, building on existing research results, adds the perspective of health care workers with regard to home-based care of the elderly.

Keywords Elderly, Residential housing, Person-environment fit, Barrier-free homes, Home-based nursing and care

Introduction

Aging in place is a social phenomenon describing the desire of senior citizens to remain in their own 'four walls'. It is winning favour more and more with most European societies: for example, in Germany, around 93% of the elderly reside in their own property (Kremer-Preiß, 2012) and they prefer this solution to all others, such as communal living spaces with home care or institutions with an emphasis on support and care in daily life. This relatively large proportion of people – in Austria it is about the same proportion – has remained constant for decades and there are currently no

indications that this fact will alter drastically, despite further welcome developments relating to both concepts for care of the elderly and living concepts in general. This social phenomenon is "closely tied to a strong societal and personal value of independence" (Mihailidis et al., 2008, p. 1).

Developments in population structure also lend relevance to aging in place (Statistics Austria, 2012c): the number of elderly people within the Austrian society will increase in hard numbers in the coming future and also in relation to children, young adults and the population of working age. Currently 18.2% of elderly people over the age of 65 is opposed to 20% of young people under 19 years of age and 61.8% of adults aged between 20 and 64 years. By the year 2030, the number of elderly people in Austria will have risen to 24%. The proportion of both young people (19.1%) and of adults (56.9%) will both have fallen (*ibid.*).

Theoretical considerations

Aging in place

"Aging represents a complex blending of physiological, behavioral, social, and environmental changes that occur at both the level of the individual and at the level of the wider community" (Satariano, 2006, p. 39). Both individual and environmental factors influence aging, as research has repeatedly shown (Iwarsson, Wilson, 2006; Livette, 2006; Wahl, Iwarsson, Oswald, 2012). Key factors relating to environmental influences such as the home itself and the specific area of residence in question have not been accorded great notice in research up to the turn of the millennium. Wahl, Iwarsson & Oswald (2012) describe this as somewhat surprising, particularly as Lawton & Nahemov's oft-cited competence-environmental press model (1973) four decades ago came to the conclusion that environmental factors play a meaningful role in later stages of life. The reason for this predominance is that the physical competencies of the elderly decrease and they are becoming increasingly incapable of adapting to current given environmental factors. The origins of investigation into the influence of environmental factors on the aging process come from ecological gerontology (Lawton, Nahemow, 1973; Rubinstein, 1989). In this paper, aging in place is seen from just this perspective, namely with particular emphasis on the exchange process between persons and their social-spatial environs.

Meaning of home

As a dwelling or home in the sense of social-spatial environs is a multifaceted interplay of objectively measured parameters and subjectively meaningful allocations, significant attention will be focussed on this aspect. As far as research for psychologists and sociologists is concerned, the importance of a person's dwelling has been clear since the 1970s (Moore, 2000; Leith, 2006). Henceforth, the importance of a dwelling was integrated increasingly into social, historical and cultural contexts (Moore, 2000; Dahlin-Ivanoff *et al.*, 2007). Years later, the social-spatial context of a

dwelling has been added to research interest (Moore, 2000). It is now broadly understood that living space means much more than just space though. It is not only made up of objectively calculable parameters. Using the standpoint of domestic sociology, Brauer (2008) examines a change from purposeful relevance to residence acting as a space for individual gratification. The many, and somewhat lexically elaborate definitions to be found in specialist literature conceive home as a safe haven, a feeling of security and intimacy, a place of refuge, as the birthplace of memories, an epicentre of social gathering and space for communication, an expression of one's own personality, an expression of independence, a place to care for and be cared for, but also as a source of burdens and restrictions and as a place to simply spend time (Rubinstein, 1989; Sixsmith, Sixsmith, 1991; Moore, 2000; Oswald, Wahl, 2005; Iwarsson, Wilson, 2006; Dahlin-Ivanoff *et al.*, 2007; Backes, Clemens, 2008; Wahl, Oswald, Iwarsson, 2012; Elsner, 2012). One's dwelling is accorded more and more significance with each passing year: on the one hand, the increased number of hours spent there as the retirees no longer need to go out to work, and on the other hand, the physical limitations which the elderly increasingly face mean that one's home becomes one's actual life focus (Oswald, 2010; Backes, Clemens, 2008). Senior citizens spend most of their time at home and perform around 80% of their daily activity there (Saup, 1993; Mayer, Baltes, 2001; Gitlin, 2003; Tötzer, Loibl, 2009). One's home and neighbourhood are the most important social-spatial contexts for all aspects of life as far as senior citizens are concerned (Saup, 1993). Elderly are happy with this state of affairs. Their own homes are important to them (Rubinstein, 1989; Sixsmith, Sixsmith, 1991; Moore, 2000; Oswald, Wahl, 2005; Leith, 2006; Dahlin-Ivanoff *et al.*, 2007). They prefer it to other forms of accommodation, even when they come up against difficulties (Iwarsson, Wilson, 2006; Wahl, Iwarsson, Oswald, 2012; Kremer-Preiß, 2012). Studies show that their home can have a positive effect on the elderly as homeowners: their quality of life, their state of health and even their personal identity can be strengthened, and independence is accentuated (Sixsmith, Sixsmith, 1991; Moore, 2000; Dahlin-Ivanoff *et al.*, 2007; Himmelsbach, Oswald, 2010; Wahl, Oswald, Iwarsson, 2012; Elsner, 2012). The length of time living there, and the number of experiences appear to influence the relationship to the home positively (Sixsmith, Sixsmith, 1991).

But a dwelling is not always just a positive experience. With decreasing physical competencies, one is confronted more and more with challenges at home. This phenomenon particularly crops up when the residence in question is not constructed barrier-free. Cleaning, maintenance and repairs of both house and garden, if applicable, overcoming differences in floor levels, particularly individual steps or staircases, difficulties in the kitchen or the bathroom (Rolfe *et al.*, 1995; Oswald *et al.*, 2002; Barlow, Venables, 2004; Iwarsson, Wilson, 2006; Livette, 2006) are all amongst the problems which are associated with decreased physical competence and a lack of barrier-free dwelling. The strategies chosen by the elderly as an answer to these problems are: acceptance of the situation and a conscious decision to effect no changes; the realisation of appropriate housing adaption, or even relocating to an alternative housing type, eventually in combination with the aspect of nursing care being provided

there (Filion, Wister, Coblenz, 1993; Gibler *et al.*, 1998; Livette, 2006; Iwarsson, Wilson, 2006; Saville-Smith *et al.*, 2007; Livette, 2007). Housing adaption in this instance include not only changes to the building structure (eg. the fixture of a walk-in shower) or to fittings (eg. seating elevation, inclusion of kitchen seating) but also the provision of assistive technology (eg. grab rails, handrails) (Iwarsson, Wilson, 2006; Reindl, Kreuz, 2009; Wahl, Oswald, 2012). Interventions and support services associated with home modification have been implemented in Germany, for example, since the 1980s. However, studies examining the success, effectiveness or efficiency of such measures still hardly exist (Wahl, Oswald, 2012, p. 493).

Apart from being a place of residence, one's home can also provide another relevant function: namely, as a place for nursing and care. "Housing is being asked to perform an increasingly important role in the provision of health and social care to frail older people. Sheltered housing and residential and nursing homes are being replaced by the mainstream housing stock, with appropriate packages of care and physical adaption, as a location for care provision" (Barlow, Venables, 2005, p. 795).

Residential housing

Intuitively approached, dwellings are three-dimensional objects, creating both area and space used for residential living. They encompass different property types, such as detached houses, semi-detached houses, terraced houses, and blocks of flats in multi-storey buildings. Definitions of real estate can focus on physical, economic and legal aspects (Bone-Winkel, Schulte, Focke, 2008; Gondring, 2009; Brauer, 2011). Property counts as one of the most durable and cost-intensive assets for gratifying human needs. In contrast to other assets, real estate is characterised by the following distinctive features (Bone-Winkel, Schulte, Focke, 2008; Gondring, 2009; Brauer, 2011): long life expectancy, long production time, heterogeneity and uniqueness, dependency on its' location, low flexibility in utilisation, and a complete lack of any possibility of being substituted. Possible criteria for further classification of residential housing is the size of a dwelling in square metres or number of rooms, condition of the building or year of construction, fixtures and features and quality of the interior (Brauer, 2011). In the present study, the dwelling represents the relevant spatial environment being analysed.

The social-spatial context of aging in place in Austria

As well as the traditional method of living in one's own property, the elderly nowadays have the additional choice of alternative living facilities which can also include the aspects of care and nursing: common housing, multi-generational housing, sheltered housing, as well as nursing homes and retirement homes. Höpflinger (2009, p. 141) points out that the "conventional dichotomy of living at home or living in an institution" has visibly been dissolved.

As aging in place focuses on staying put, the social-spatial context of living in Austria shall be described: As of 2010, Austria's population of 8,387,742 live in 3.6 million households (Statistics Austria, 2011b). Whilst two thirds of these households

are made up of several people, one third is single-person households. The average size of an Austrian household, as measured by the number of persons living therein, is 2.29 (Statistics Austria 2011a). The average living space available to each member of the household is 43 m² (Datler, Mahidi, 2009, p. 458). Breaking these statistics down, however and focusing on the age group of over 65 year-olds, the picture looks somewhat different: these 1,480,146 senior citizens, making up almost 18% of the population, enjoy more living space: per household, they have around 100 m² at their disposal (ibid.; by own calculation). The reason for this phenomenon is the relocation of children and (previous) partners as well as cases of deaths of family members. Older people either live in households made up of several people or single-person households – a ratio which is somewhat different to the Austrian average. Half of the elderly live alone. The older you become, the more likely you are to live alone. The number of single-person households increases with age. Women are more affected by this tendency than men: three-quarters of single-person households consist of females (Statistics Austria, 2011b).

58% of Austrians live in detached, semi-detached or terraced houses. Most of these are located in either a partly urban or a rural area. 42% of Austrians live in flats in built-up residential areas which tend to be in urban areas of large towns with more than 100,000 inhabitants (Datler, Mahidi, 2009, p. 459). Those in Austria living in a house overwhelmingly tend to own it, whereas those living in a flat are 80% likely to rent. Only one sixth of flats are owned by their inhabitants (Statistics Austria, 2012d, p. 49).

Austrians, and especially older people in Austria, are generally satisfied with their residential properties. 81% of those over 65 are either very or quite satisfied, 15% are somewhat satisfied, and the small residual is somewhat or extremely dissatisfied (Statistics Austria, 2012d, p. 53).

The decades have seen the standard of living in Austria rise to a high level in international comparisons. Orienting the analysis to those categories developed in the 1980s, then 92% of all Austrian flats belong to the best-scoring category A (Statistics Austria, 2012a). Concretely, this means that the flat is in a safe condition and can be moved into immediately and without resulting danger, it has at least 30 m² total floor space, and is fitted with at least one bedroom, a kitchen or kitchenette, a hallway, a toilet, a bathroom, some form of central heating or equivalent fitted heating system as well as a hot water system. Scoring category B differs from category A in that total floor space of at least 30 m² is not a prerequisite. When a flat is in a safe condition but only has a water source and toilet and lacks the criteria from category A, then it should be included in scoring category C. The last scoring category of D includes flats where there is no water source or toilet present within the flat (Mietrechtsgesetz § 15a [*Act on Tenancy Law*]). In Austria, only 1.5% of all flats are so-called substandard dwellings (Statistics Austria, 2012a). The incidence of user-friendly residential building construction and improved interior fixtures and fittings increased markedly during the 1960s, when post-war reconstruction was prevalent in Austria (Datler, Mahidi, 2009, p. 469). This is apparent when the quality of fittings and fixtures in residences is considered according to the era when they were constructed. Historical

multi-storey buildings from the construction period dating from before 1919 tend to contain fewer lifts and communal grassed areas than blocks of flats built since the 1960s (Datler, Mahidi, 2009, p. 470). The lift which may be missing in the high-rise block of flats is obviously more of a problem for the elderly. Around half of the elderly, who live in such blocks of flats, are affected (Datler, Mahidi, 2009, p. 469). Barrier-free construction aims to create a spatial environment for people in order to provide accessibility and practical utilisation for all. The relevance of this subject matter has demonstrated itself during the last few years through the conception of accepted legal general construction requirements. It was the case that barrier-free surroundings were neither customary nor a matter of course. The norms, which have been issued in Austria over the last few years encompass the dimensions and design of rooms (eg. sanitary facilities such as toilets and bathrooms) and technical features (eg. lifts). They reveal a certain consensus regarding the current state of technology and engineering in use, and act as a kind of recommendation – unless they have been incorporated into federal building regulations and are therefore legal obligations for the construction industry. In this way the norms have already had an effect on new construction. The current inventory of dwellings is, however, not included. Empirical evidence shows that the lack of barrier-free residences definitely constitutes a problem for the elderly, that barrier-free construction is not accounted for in the current inventory of flats (Saup, 2003; Barlow, Venables, 2004; Livette, 2006; Saville-Smith *et al.*, 2007; Nunn *et al.*, 2009), and that it is the person-environment fit what should be considered (Iwarsson, Wilson, 2006; Livette, 2006; Wahl, Iwarsson, Oswald, 2012). Wahl and Oswald (2012, p. 494), for example, using a report from the Agency for Assisting German Senior Citizens (*Kuratorium für Deutsche Altershilfe*), put on record that three-quarters of all German households containing senior citizens have steps or raised thresholds in the entrance area of the dwelling, around a quarter have bathtubs which are too narrow or short, and approximately 85% have no walk-in shower. Iwarsson *et al.* (2006) discovered deficiencies within various EU countries regarding the interior features present in dwellings inhabited by over 80 year olds living on their own: 84% have no handrails in the entrance area of the flat, 75% have bathtubs which are difficult to climb into, 62% have slippery surfaces either inside the shower, 57% face slippery surfaces outside the shower area, 47% have too high, too low or too uneven steps. 47% of all barriers experienced in daily life are within your own dwelling and then primarily within the sanitary facilities or the kitchen, 23% of the obstacles are in the general entrance area of the dwellings, and 30% are situated in the residential environment. Wahl and Oswald (2012, p. 496) point out that, facing these obstacles, the elderly do not appear to be adversely affected, and they do not seem to be very motivated to realize improvements. However, the authors argue, this should not lead to a reluctance to carry out home adaptations or to take this subject less seriously. For Austria, a quantitative analysis of (non) barrier-free elements within the existing housing stock has not been undertaken up to this time. From the professional experience of the author over the last 13 years and other research engagements, there are no corresponding incidents of greater deviances from existing results in other European countries.

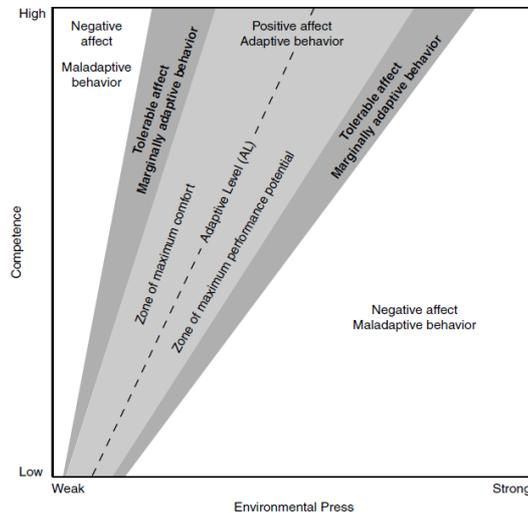
Relocation is another topic when it comes to describing the social-spatial context of aging in place. Austrians relocate on average 6.7 times in their lifetime (Statistics Austria, 2012d). Getting older, this becomes more of a minor consideration: only 2.3% of senior citizens relocate within Austria. If they do happen to move, most will stay within the same parish (53%). A further 22% remain within the local district and 14% stay at least in the same province. Emigration hardly plays any role at all for most elderly Austrians: only 0.1% move abroad (ibid.).

The probability of having to make use of *care* or nursing increases with age. This challenge is, in case of aging in place, taken on informally by family members or formally by (professional) carers. In 2007 there were approx. 3,400 officially registered carers in Austria (Gesundheit Österreich, 2007, pp. 1). Around 127,900 people were cared for in their own home using public expenditure (Statistics Austria, 2012c). The costs of the care itself are dominated by staffing costs, due to the high nature of the human resources involved; however, these are problematic to analyse in Austria due to missing data or lack of possibility for comparison (Schneider *et al.*, 2006). The function of mobile home-based care is still only part of the final equation: Schneider *et al.* (2006, p. 13) estimate that the additional outlay for informal home-based care (eg. that provided by family members) is approx. € 2 to 3 billion p. a. and they observe critically that this subject matter has had too little attention directed on it up until now. Mühlberger *et al.* (2008, p. 14) allude to at least 75% of home-based care being informal.

Competence-Environmental Press Model of Lawton & Nahemow (1973)

Ecology is the science of relationships between creatures and their environment. Lawton & Nahemow (1973, pp. 619) clarify the subsequent interdependences emerging and this integral approach in order to develop a sociological understanding thereof. They perceive the ecology of aging to be a continual process of adaptation. “The primary thesis is that human behavior and function result from the competencies of the individual, the demands or ‘press’ of the environment, and the interaction or adaptation of the person to the environment. Moreover, the relationship between the individual competency and the environment is viewed as a dynamic process; both the press of environments and levels of individual competencies change as part of the process of aging” (Sartariano, 2006, p. 43).

Figure 1. Competence-Environmental Press Model of Lawton & Nahemow (Sartariano 2006, p. 44; see also Lawton, Nahemow 1973, p. 661)



An (idealistic) aim is to produce equilibrium between man and his environs. In order to do so, it is necessary to avail oneself of the existing variety of strategies to cope with the phenomenon of decreasing competencies in old age. For example, adjustment, repression, simplification and routines all serve to minimise external disrupting factors. This can all only work up until the point when man has no more influence over environmental factors – a state which can heighten his vulnerability. Lawton & Simon (1968) describe this as Environmental Docility Hypothesis.

Method

The aim of the empirical study is to elaborate on the demands made on the dwelling arising in a specific situation: when care and nursing needs are provided within the home of elderly people. The precise research question here is: what demands do dwellings have to fulfil within the context of home-based nursing care of elderly people?

Residential housing affects various sciences, such as law, engineering, social and economic sciences. In the following study, aging in place is examined through the eyes of a social scientist. Social science wants to clearly understand, describe and explain social action and the underlying causality (Weber, 1976, p. 1). As the penetrative analysis of the data involved promises a large amount of new information, social research may strike a new path here qualitatively. Qualitative social research is characterised by being descriptive and explorative and concentrates intensively, unlike quantitative social research, on individual cases, which should make a typical pattern of action recognisable (Mayring, 2008; Lamnek, 2010). In order to be able to describe and comprehend social action, it is important to penetrate the environment pertaining to the research. This is made possible by observations, interviews and experiments in the field (Mayring, 2008). In the study at hand, there are interviews with experts

working in the field of home-based nursing and care, who possess the relevant specialist knowledge which is in the focus of interest. This study has confined its research group to registered auxiliary nurses and health care staff who work for organisations in the area of providing home-based nursing and care. In order to find participants for the study, it was necessary to conduct preliminary interviews with policy makers from care organisations. Six randomly chosen care organisations in Austria have been contacted. Their policy makers acted as brokers and consequently recommended suitable staff members to participate in the study. The participants of the study were all registered auxiliary nurses or health care workers who boast long-standing professional experience in the field of 24 hour nursing and care, being also responsible for advising potential applicants and their families prior to an assignment (see table 1; the organisations and the subjects are displayed anonymously). Interview guidelines allowed correct formal discourses about all themes relevant to the research, the comparison of interview results with one another, and adequate treatment of aspects arising during the interview which were not anticipated. The guidelines encompassed questions relating to: the significance of the residence itself when providing home-based care, assessment criteria for the residence from the viewpoint of the health care worker as well as suggestions for possible suitable home improvements. Interview after interview has been conducted until the point of theoretical saturation has been reached– the point where additional interviews would not add up to any new insights (Flick, 2000). This occurred after the interviews with eleven health care workers had taken place and been analysed. Ten women and one man were interviewed. The (individual) discourses, which took place between January and March 2011, lasted, on average, around 30 minutes. The majority of them took place in offices at the care organisations and some were conducted in quiet rooms at restaurants located near to the subjects' place of employment.

Table 1. Socio-demographic description of the research group (Trofer, 2013, p. 141)

health care worker (name)	age	sex	organisation	professional experience (years)
Monika	55	f	A	36
Bernanda	42	f	A	21
Sabine	47	f	B	15
Tanja	44	f	C	17
Peter	56	m	B	25
Ilse	56	f	B	10
Michaela	28	f	D	given
Elisabeth	43	f	D	given
Fanny	42	f	E	20
Paula	47	f	F	22
Kristina	53	f	G	35

The interviews were electronically recorded, transcribed word for word and analysed using Qualitative Content Analysis according to Mayring (2008). Its aim is to analyse written communication methodically and systematically, whilst adhering to the regulations. Particular importance is attached to discourse coherence, category formation, subject matter acquisition, orientation on up-to-date research and reflexion (Mayring, 2008, pp. 42). The entire process of analysis is documented in order to create a basis for transparency and reconstruction (Gläser, Laudel, 2008, p. 27). The central element of work with Qualitative Content Analysis is the category formation. It enables structuring of the material. Categories are abstractions of material on an equal level. The categories were derived from the data inductively (Mayring, 2008, pp. 43). Mayring (2008, p. 75) considers them to be “procreative” for qualitative social research as they strive for a reproduction of the material which is as “naturalistic and succinct as possible without distortion due to presumption by the researcher”.

Results

The results clearly illustrate that the person-environment fit is remarkably significant for health care workers and the organisations they represent. However, the framework in question for both the person and their environment experiences some enrichment in case the health care worker being based in the patient’s own dwelling. Now the person in question is not just the patient at home, but also their health care supplier. The dwelling seen as a social-spatial environment likewise increases in importance: it now has to fulfil yet another function – it is not only a residence; in addition, it is the place where nursing care is being provided.

Person-person fit

The ‘fit’ here does not just refer to the person and their social-spatial environment, but also the ‘fit’ between the people concerned: appointing a care organisation and integrating a health care worker in the patient’s life and home involves various challenges, which the care organisation attempts to anticipate. The choice of health care worker for each assignment, which naturally falls to the care organisation, is carried out (where possible), taking both the personality of patient and health care worker into account and additionally, accommodating the individual nursing requirements of the patient with the knowledge, skills and capabilities of their (designated) health care worker. This alignment is usually estimated by the staff of the care organisation before the assignment begins. The following direct citations from the interviews act as anchors, functioning as a prototype for deriving the results (Mayring, 2008).

“It just has to feel right. It is, in any case, a difficult situation. Because it’s a very personal issue and the chemistry has to be right. For example, we once had a client. She had a really small flat with two rooms and the carer had to sleep in the living room. But both of them got on with each other perfectly. Then that carer left the assignment [...], and the new carer didn’t want to put up with sleeping in the living room.” (Ilse, p. 2)

“Imagine that you’re always dependent on someone else, that you can’t even get anything for yourself or stuff like that. So, d’you see, it has to be a person that you get on well with.” (Kristina, p. 5)

Person-environment fit

For analysis of the person-environment fit, it is the two people – patient and health care worker – as well as the residential building, from a social-spatial aspect, which should be aligned. The relationship between the patient and their dwelling is of paramount importance for the care organisation as the home – in this specific situation – will henceforth fulfil two functions: it is a place to live and an opportunity to retreat (from work) for the health care worker and furthermore the spatial centre of the nursing being provided. The actual condition of the patient’s home is assessed in writing before the nursing position begins. Two questions are used: firstly, whether sufficient room (bedroom and sanitary facilities) is available for the health care worker and whether it is separated or used commonly by the inhabitants of the dwelling; secondly, the analysis of the edificial features of the dwelling in order to answer the question, if and how nursing care can be provided. With regard to the first question, when the availability of a room for the health care worker the focus of the enquiry is, then the following (information) should be put on record: a best case scenario involves both a separate bedroom for the health care worker and a bathroom of their own. This is sometimes not applicable, naturally. When this is not the case, the care organisation considers the practical obstacles: other rooms – including those with general access – are converted into sleeping accommodation for either the health care worker or the patient whilst the sanitary facilities available are shared. This may – practically speaking – mean that the health care worker is accommodated in the generally accessible living room. A second possibility, when space is of a premium, is that the patient themselves moves into the living room and the health care worker uses the bedroom previously inhabited by the patient.

“Whether there’s a room for the carer, or not. Although a room doesn’t always have to be available. It depends on the whole situation. Because you can quite easily sleep in the living room or it can even be a walk-through room, if the client is bedridden in the bedroom. Then it doesn’t matter anyway.” (Sabine, pp. 1)

“And when you’re talking about twenty-four hour care, then they [carers; annot.] need a room, too. This means that has to be another one there. And the flats are mostly too small anyway, ’specially in Vienna ’cos loads only have a bedsit [combined bed-/livingroom; annot.]. And some have a kitchen or living room and a small bedroom. If the person is bedridden, it is possible, because then the carer sleeps in the living room and the client in the small bedroom in a nursing cot. [...] You can usually get the care cot into the small bedroom. But I’ve also dealt with one room flats. And then there’s the question whether the carer can cope with that. Because then it’s a really tight squeeze.” (Tanja, pp. 2)

The criteria analysed with respect to the alignment between person (patient) and social-spatial environment, overridingly concern the criteria relating to barrier-free

residential buildings (eg. availability and dimensions of lifts in multi-storey blocks of flats, dimensions of rooms themselves and sanitary facilities, existence of steps). Health care workers criticise the lack of barrier-free dwellings and the far-reaching consequences which are associated with them: these have an effect on the quality of life for patients, working conditions for health care workers and in the worst case, lead to (fear of) compromising the safety of both patient and health care worker. For example, when access to the dwelling and its' surroundings is only possible by going up or down steps and/or staircases, a possible consequence of decreased mobility may be that the patient is forced to stay at home because they are not or no longer capable of tackling the stairs, even with assistance.

“There’s these mezzanine levels in Vienna. You can’t even get down with the wheelchair ‘cos there’s no way of getting down there. [...] No way. They [*patients; annot.*] have to stay in the flat the whole time.” (Tanja, p. 7)

“There’s often no lifts in old buildings. For example, we had a patient who would have loved being able to go out. She sat in a wheelchair and the lift that was in the building, you could only get to it using a few steps [...]. The stop was at the mezzanine level. And downstairs at the entrance, there were also some stairs and up to her flat, too. Yeah, who can manage that? I felt really sorry for her.” (Ilse, p. 4)

“He [*patient; annot.*] doesn’t just want to go out on the balcony. He’d like to go out on the street, and see something different.” (Peter, p. 10).

As far as the care organisation and its' staff is concerned, deficient edificial features are either handled with by improvisation, relevant home adaption measures are recommended or the nursing assignment may even be refused. The narrations cover a lot of edificial features, as the following examples show.

“With the flat, is there a lift in the building? Yeah. And does the wheelchair even fit in there? Because most of the time you can’t even get the wheelchair in at all. Yes. You assess what they [*patients; annot.*] need and want using these criteria. Or how we can make it better for them. When you have a wheelchair user, then, erm, you put the carpets away, you just take all the obstacles away. Yeah. Like when cupboards are in the way and you need to get around the corner. The bathroom is usually too small. You see that a lot. So then you can only really wash them at the washbasin, if you’ve got room to get them in there. But normally you can’t even get in the bathroom with the wheelchair. And then getting them into the bath tub with the body lifter or whatever. Or into the shower. The next problem are showers because most of them have got a small step. That means you have to completely rebuild the bathroom if there’s someone with a wheelchair. Otherwise you wash them in their bed. [...] Yes, grab rails if he can still stand up from his wheelchair to get into the toilet. Does the wheelchair fit in the toilet, through the door. Yeah, that’s the next problem, when the doors are so narrow.” (Tanja, p.1)

“The small toilets are a big problem. You often have mobile or partly-mobile patients, yeah, those people who need particular support, they’re limited and handicapped due to the amount of spatial situation in the toilet, because it’s just too tight in there. [...] It’s often a bigger issue than the bathroom. [...] Because assisting someone is really

difficult in those small tight toilets. This means, that often we, although the patient is halfway capable, mobile themselves, are forced to resort to a so-called toilet chair.”(Fanny, p. 9)

“Often the doors are too narrow for someone in a wheelchair. Then it’s a near thing. You have to see if you can get the patient off their wheelchair onto the toilet chair and then whether you can [...] move with it.” (Ilse, p.4)

If edificial features are not ideal, improvisation becomes part of the nursing work.

“There’s a lot of improvising in the home-based care industry. You have to improvise. At the hospital, you’ve got everything you need. I also worked in a hospital, twenty-five years ago, and everything was pretty easy there. But here, in home-based care, you have to be innovative and creative.” (Elisabeth, p. 5)

“The caring itself compensates for what the accommodation doesn’t manage to provide.” (Fanny, p.3)

Unsuitable edificial features can also contribute to a compromise in the safety of both patient and health care worker and sometimes triggers fear of a situation perceived as hazardous.

“And this fear of having a fall makes it [...] even more difficult to carry out personal hygiene in different showers or bath tubs. There’s still these old showers which are forty centimetres high, which you have to step over.” (Peter, p. 2)

“If the person needing care only has a one bedroom flat, like most of the old flats had, with these high shower stalls, or having to climb in the bath tub, there is quite a high risk of being injured. In case the risk of falling is quite high, we [...] make sure that we get to the washbasin with an attendant-propelled chair and help with the personal hygiene there. And if the chair’s too big and the patient can’t manage to get in. The carer can’t just lift somebody who weighs sixty or seventy kilos. And you probably have to do that everyday. And then we just give up completely. (Peter, p. 7)

“The bathrooms are quite small, and that’s very dangerous when it comes to personal hygiene or taking a shower. Of course, the carer doesn’t have much room either and if there’s a fall, she can’t react that well.”(Michaela, p. 4) “[*In wet rooms; annot.*] most of the time it’s just the safety of the client that’s compromised. And of course, then the safety of the carer is also an issue, as she doesn’t feel safe either.” (Michaela, p. 5)

Review of the person-person fit and the person-environment fit is carried out on the basis of subjective experience and estimation of the care organisation staff; where applicable on the basis of written criteria check lists.

“When the flat’s really bad, or the house is really bad. And, yes. I know what to do when it’s like that. It’s one of those things, I don’t have a special checklist.” (Paula, p. 1)

“There are these checklists for adapting the flat, but I don’t even know at the end what I should do first. Is that more important than the steps or is the shower more important? [...] You have to begin where it’s most dangerous.” (Monika, p. 20) „We have a really thorough questionnaire, where they cover almost everything, not just the

hygienic situation, also the surrounding area. Where does he live? How does he live? Does he live in the countryside, in the town? On his own, with help, with no help? Are there any relatives? What do the relatives do? What condition is the flat in? Where do the relatives live? Where's the nearest public transport?" (Monika, p. 15)

Health care workers are experienced with regard to certain home adaption measures, such as: the adoption of smaller or larger pieces of assistive technology (eg. grab rail, raised toilet seat), the installation of facilities (eg. stairlift) or modification measures for the improvement of edificial features (eg. walk-in shower, relocation or demolition of walls). Recommendations for home adaption measures made by the care organisation tend to be (at least) partly acted on by the patients. From the point of view of the health care worker, they can lead to an enhancement of both the patient's and the health care worker's well-being and to an amelioration of working conditions, which benefits both parties. However, speaking from the experience of health care workers, two arguments lessen the effectiveness of home improvement measures: firstly, from their point of view, the improvements do not always work, and secondly, the patients are often sceptical about them. The first argument refers to the fact that the inhabitants (patients) have grown accustomed to the (objectively suboptimal) conditions and any change in conditions may bring negative consequences with it. Thereby, the subjective benefit is queried by the patient, and also by the health care worker.

"So, if there's no danger of falling, if he's [*patient: annot.*] got no problems with his legs and if he's only suffering from dementia, then it's actually dangerous if you remove the doorstep, 'cos he's been going over that doorstep for fifty, seventy years and he'll definitely fall if there's no doorstep there anymore. 'Cos he's been used to lifting his foot for seventy years." (Monika, p. 23)

"The bathroom is always a main concern. [...] Only two got an estimate done [*patients: annot.*], and then another estimate, and then two, only two actually got it converted. Barrier-free. So that you can get into the whole room, and you can really do everything you need to with no problems. [...] There's these hoists [*to help you get into the bath: annot.*], that means you can put your patient in it and they get lifted hydraulically into the water. [...] Older people are really scared of such things, they think they're going to fall off them. They can't be too wide, otherwise they don't fit into the bathtub. The bathtub has to be long enough too, big enough." (Peter, p. 9)

The second aspect which puts home adaption measures into perspective is the patient's eventually negative opinion. This critical stance of patients with regard to (home) adaption measures may stem from the fact that the patient finds it difficult to accept changes in her or his home. Health care workers are keen to point out that diplomacy is of the essence when dealing with the patients, and that the individual context has to be taken into account.

"Having this understanding, they are old people after all, older people, if you look around you, what forty year olds find hard, moving furniture around. And then you get someone coming along, telling you, you want to be cared for at home, like, I was a carer myself for a long time. It's really about good communication, you develop it slowly, you

have to learn it. You can do it, or you can't. You have to learn to do counselling interviews. [...] When I come in with my checklist about adapting their home and start ticking things off on it. Yeah, your doors are too narrow, you need to fit a shower in here, you have to lower your cupboards 'cos that's not OK like that, you have to take out all your doorsteps. Then you're gonna need a nursing cot, a bedside table and we'll have to change all your lights, cos they're too dark. And it's no surprise that you fall over in the corridor 'cos your light's not bright enough there. And then you'll need to change the doorknob, 'cos you've got, you've got to get from inside to outside. And then we'll change all the keyholes. And all your windows are wrong, 'cos you can't open them properly. [...] Then he says, no thanks, I don't wanna do all that. [...] 'Cos that'd be too much change for me, in the seventy years I've been here. It's also a lot to do with memories. Yeah, it's not just about rationality." (Monika, pp. 19)

"I can't just say, take the carpet away. I can only recommend. [...] I can't make the decisions. You have to be really careful how you deal with the whole situation." (Elisabeth, p. 8)

"Of course, the rational and emotional differences are huge." (Fanny, p. 10)

When home adaption is seriously being considered, the following points need to be clarified: besides technical aspects, financial means must be made allowance for, actual use of any alterations needs to be pondered over and the decision-making capabilities of, for instance, family members should be examined.

"Is there money available? In all the conversations with the family, we say we need to rebuild this or convert that. These conversions usually cost a lot of money, and aren't always done. Of course, it'd be important for the nursing. 'Cos a lot of ladies [...] if you could get in the shower with her wash chair, you could, er, look after her better." (Peter, p. 1)

"Yeah, there was [...] this lady, she was really mobile earlier, and then she couldn't move around so well anymore, and she couldn't get out, there was no stairlift. And then we always had to stay inside, in the house. [...] And she was really unhappy. [...] And then her family, she had four children, and she thought about it for a long time, and then she bought a stair lift. That took ages, yeah. Yeah, and financially. The children had to agree, or, they'd pay for it, yeah." (Bernanda, p. 22)

Discussion and conclusion

To recapitulate, it is important to put on record that research up until the turn of the millennium has not sufficiently taken spatial context into account when it comes to aging. For a decade now, research has picked up on social-spatial contexts, which have brought promising results for the research area of aging in place. Older people perceive their own home as something fundamental; the significance they attach to it is high. The meaning of home is inextricably linked to complex, copious, fluctuating and context-dependent connotations. In addition, a person's home has positive effects on elderly people as it consolidates their own identity and increases their contentment and sense of well-being. However, it should also be mentioned that this effect has its' limits and a dwelling can develop into a source of restrictions and obligations. The

challenges can arise from the dwindling of physical competencies and edificial barriers which represent the spatial environment.

The Competence-Environmental Press Model from Lawton & Nahemow (1973), which is the basis for further development with regard to the person-environment fit (Wahl *et al.*, 2012), constitutes the theoretical framework for the study at hand. The results of the present paper studying the social-spatial context of home-based nursing and care in the perspective of health care workers, brought notable findings: the person-environment fit is extremely pertinent for home-based care and will enhance further dimensions. Residential housing, due to the fact that it needs to fulfil certain functions, is becoming a “health care arena” (Iwarsson, Wilson, 2006, p. 57) and has to – with respect to 24 hour care provision – offer accommodation options for the health care workers. Additionally, it would have many positive aspects if dwellings were designed in a barrier-free way. Yet, it is just this barrier-free construction, which is missing in most cases. Objectively measured living standards and subjective satisfaction with living conditions are definitely high in Austria and many other European countries. It must be said, though, that these analyses of living standards do not take many aspects of barrier-free dwellings into account. Designing barrier-free residential housing is a relatively young discipline. The impact of the statutory framework created within the last couple of years, with regard to the long planning and construction periods necessary for realising new dwellings, will only be noticeable in the next few decades. Consequences of a lack of barrier-free design are manifold. In case of unmanageable staircases, for example, the elderly may be tied to their home. Too narrow sanitary facilities can create a hazardous situation or even make it impossible to use them, in case help is required in the immediate proximity of the patient.

When health care workers are confronted by inadequately designed buildings, they react by either recommending relevant home adaption measures, by improvising, or – prior to accepting the health care assignment – by refusing to ‘take on the job’. The results of the present study show that health care workers have a great deal of experience in this area at their disposal. Nevertheless, they adhere to the idea that home adaption measures do not always bring the desired result and patients sometimes are averse to taking their advice on board. This point reinforces the need to see this strategy in the individual context of the person and the dwelling and to question ‘improvements’ critically together with all parties involved.

As the model of Lawton & Nahemow (1973) shows, there are two ways of dealing with the matter, when the person-environment fit is no longer fulfilled: the person themselves changes – which, with regard to old age, might not be possible – or the changes take place in the social-spatial environment. It goes without saying that new housing can be designed barrier-free from the outset. But, as Lawton & Nahemow (1973) point out, the social-spatial environment should not lose the aspects it has, which are motivating and both competence-boosting and competence-preserving.

Unquestionably, this study is limited to the perspective of health care workers in the context of home-based nursing and care in Austria and thus has its limitations. Further research could show the payoffs of home adaption measures, or could go into

more detail with regard to the personal component of the relationship between patient and health care worker. Additionally, the economic implications of building barrier-free housing has not been analysed so far, which surely is a matter of interest when it comes to real estate developers. Furthermore, raising public awareness of this topic, also seems advisable for the construction of private housing, for which there is no valid legal framework for barrier-free construction and design at present. “As living arrangements in old age affect us all and dwellings that you can call your own remain valid as the main social-spatial context, strategies for improvements should be questioned and gathered quantitatively in order to derive consequences for policy-makers who are responsible for housing supply” (Trofer, 2013, p. iv).

Notes

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