A Sense Of Home Through The Eyes Of Nursing Home Residents

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Abstract

The nursing home is often a final stage in the living career of older persons, but the question remains whether it is a true home or merely a place where care is provided for the residents. This study investigates the sense of home and its constituent factors among both permanent and temporary residents of nursing homes in The Netherlands. A qualitative research design was chosen for the study, which consisted of in-depth interviews using a topic list that was developed through literature review and a focus group session. Autonomy and safety and security are the basic aspects for a sense of home. These aspects refer to the relationships and actions of nursing home residents and the environment in which people live. The research findings show that developing a sense of home encompasses much more than just being surrounded by personal belongings and having a private room with certain facilities. Subjective components of relationships and (inter)actions are as important as the physical component of living and housing. Only when a right balance is achieved between all factors, a true sense of home, albeit away from the familiar home someone spent most of his/her life, can be developed. Understanding these perspectives and needs can contribute to a better design and retrofitting process of future nursing homes.

Keywords: housing, interactions, living, mastery, older adults.

I. INTRODUCTION

Home is experienced as the place the older adult could not imagine living without but also as the place one might be forced to leave due to losses accompanying old age (Gillsjö, Schwartz-Barcott and von Post 2011). Admission to a nursing home and having to give up living in the community is experienced by older people as a major life event (Johnson, Popejoy and Radina 2010; Lee, Simpson and Froggatt 2013). Nursing home residents, who rely on others in terms of daily care, often no longer feel like active members of society. These people are confined within the borders of their facility, and in case persons are bed-ridden, often confined to their own room, which they sometimes need to share with a second resident. They no longer live in their own home, which has for many years been a source of shelter, comfort and social activities. A nursing home has a dual nature as an institution and as a home. Ideally, the nursing home should feel like a home, instead of a health care facility in which they reside.

When designing new nursing homes, it is important to understand the actual housing-related needs of current and future residents, as well as the needs of the professionals and informal carers who work or visit the nursing home, in order to design an environment which matches the identified needs (van Hoof *et al.* 2014a). This is increasingly important in a shifting framework of government spending, in which nursing home residents are expected to contribute to the costs of housing. Private financial contributions go together with an increased sense of autonomy (or sense of mastery) towards housing desires. Nursing home residents want to have a say in what type of room or building they wish to reside, and how the interior design looks and fits to their personal needs.

A. A sense of home

A sense of home, however, is a highly subjective phenomenon, and which differs from person to person. The built environment and possessions are important contributors to a sense of home. Andrews (2000) has raised the issue of the increasing range of places where health-care is provided and received, and the need for considering the care recipients' relationship within, and with, a variety of healthcare settings and living spaces. The views of residents are becoming increasingly important in the design of long-term care facilities. Van Steenwinkel, Baumers and Heylighen (2012: 196) studied the meaning of home for older persons, and they found that "*the feeling of homeliness is based on a dynamic balance between autonomy and security. This balance is an ongoing process, called appropriation; it is the process by which a person makes a house into a home.*"

Various studies have written about person-environment or person-object relations, outside the context of nursing homes (Van Steenwinkel, Baumers and Heylighen 2012). There are three recurring ideas, which are relevant for the current study: (i) the idea that a person-object relation is mutual, (ii) that through such relations people make sense of themselves, others, and the things

around them, and (iii) that meaning is personal, but at the same time, embedded in historical, cultural, social, economic, and other contexts. Van Steenwinkel, Baumers and Heylighen (2012) further concluded that beyond these similarities, there seems to be no complete consensus about which aspects are important for a home environment. Home itself is so integral to life itself that when older adults lose their home, "*they also loose the place closest to their heart, the place where they are at home and can maintain their identity, integrity and way of living*" (Gillsjö, Schwartz-Barcott and von Post 2011: 1).

B. A sense of home in long-term care

Apart from the theory on housing, there are numerous studies focusing on long-term care facilities and the way residents perceive their quality of life and their way of life. There are many more unstudied factors related to living, healthcare and well-being that play a role. In summary, a sense of home and quality of life in a nursing home is influenced by the social and physical environment. Autonomy and freedom, a meaningful daily life, the quality of care, and relationships and interaction with each other, as well as fitting in, are important factors. A homelike physical environment and personal belongings improve a sense of belongingness and can contribute to a sense of privacy, social activities, choice and interaction, as well as quality of life. Without a homelike environment, as sense of institutionalized living occurs (Bradshaw, Playford and Riazi 2012; Cooney, Murphy and O'Shea 2009; Bergland and Kirkevold 2006; Angus *et al.* 2005; Coughlan and Ward 2007; Fiveash 1998; Marshall and Mackenzie 2008; Wapner, Demick and Redondo 1990; de Guzman *et al.* 2012; Kahn 1999).

C. Towards a better understanding of home in long-term care

This research builds further on previous theories of Lawton (2001) and Van Steenwinkel, Baumers and Heylighen (2012) on ageing-in-place and homes for older people. To date, there is no consensus about how to design or shape a house, or about which aspects are important for a home environment that provides a sense of home. Lawton (2001: S59) lists autonomy, individuality, dignity, privacy, enjoyment, meaningful activity, relationships and interactions, safety and security, comfort, spiritual well-being and functional competence are important aspects of a home environment. After all, living in an institution is different from living in the community. According to Van Steenwinkel, Baumers and Heylighen (2012), people can only develop a sense of home if they feel safe and secure, feel autonomous and can appropriate to the environment. The right balance between autonomy and safety and security is determined by, and determining, aspects of living, healthcare and well-being of a person, and, thus, a sense of home. In a nursing home, there is a dependent relationship between residents and care professionals in terms of healthcare and activities of daily living.

This study investigates various aspects that contribute to a sense of home in a nursing home, and which are considered important by both permanent and temporary nursing home residents. A holistic approach to living, housing, healthcare and social interaction in institutional settings with a focus on the sense of home and the built environment is new. The focus of the current study is on exploring the supporting and hindering factors that contribute to a sense of home of current and former residents of nursing homes. Understanding these perspectives and needs can contribute to a better design and retrofitting process of future nursing homes.

II. METHODOLOGY

An interpretative qualitative methodology was chosen for this study, comprising of in depth interviews with nursing home residents. The Critical Appraisal Skills Programme's (2013) checklist for qualitative research was used as a guide for this study. In the following sections we describe (i) the development of the topic list based on literature review and a focus group session, (ii) the selection of participants, (iii) the interviewing, and (iv) the data analysis.

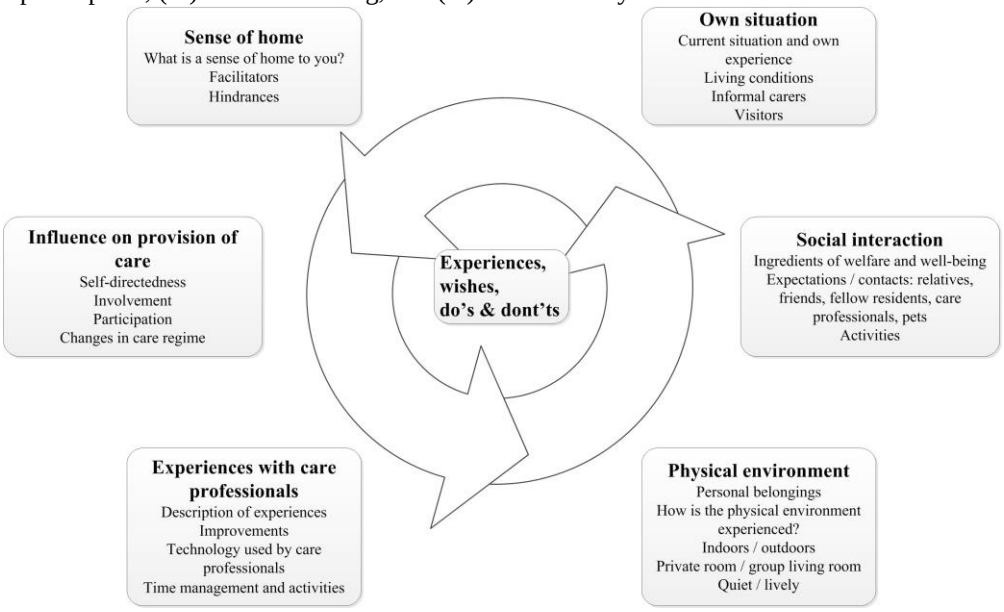

Fig. 1: Schematic overview of the topic list.

A. Development of the topic list and focus group session

A topic list, an overview of research themes and accompanying questions, was used to investigate the experiences, needs, and attitudes of the participants. A preliminary topic list was made based on literature review the work of Lawton (2001) and Van Steenwinkel, Baumers and Heylighen (2012). In this study, however, the term homeliness was replaced by sense of home, as we wanted to emphasize the component 'sense', and as we did not know if the word homeliness was applicable to nursing home residents at all, as there may have been a preference towards the own familiar home as an ideal. Relevant themes related to living and the sense of home were included, such as autonomy, a sense of safety and security, and the built environment, as well as social interaction (Figure 1). A subsequent focus group session, described in the following section, was held to refine and enrich this preliminary topic list. The participants met the inclusion criteria of the study. These criteria were: (i) participants reside in a long-term care facility, (ii) participants receive assistance for daily care, (iii) participants do not have cognitive impairments (or psychogeriatric health problems) and are able to understand and answer the questions, (iv) participants are 70 years old or over.

The focus group session was held on August 5th 2013 in a middle-sized city in the south of The Netherlands, and lasted for 2 hours (Figure 2). The session was held in a recreation room within the care facility in which the participants dwelled. Prior to the session, the focus group leader paid a visit to every participant to explain the procedure and goal of the session. A total of 7 participants took part in the session (7 females, 2 males) and all were aged 75 years old and over. Two of them were assisted by a daughter. Six participants had a health care assessment status qualifying for sheltered housing with intensive nursing and daily care, and one participant had a health care assessment status qualifying for sheltered housing with intensive supervision and extensive care. The focus group was led by the first author, who was assisted by a facilitator of the hosting care organization and a student assistant who took notes. Sessions were photographed and audiotaped. The audio file was transcribed verbatim.

Fig. 2: Focus group session with older adults.

The focus group started with a shot presentation of the research project, followed by reading out a scenario. Thereafter, informed consent documents were signed by all participants. Participants were invited to write down their thoughts in relation to the housing conditions, services and healthcare, and social contacts and network. These thoughts were written down on post-its® in analogy with van Hoof *et al.* (2014b). These sticky notes were supplied in multiple colors for the categories: necessary (green), desirable (orange), a dream (pink) and never-again (blue). Participants were stimulated to write down key-words or short statements on these notes and then stick them to the walls around them. The number of ideas that the participants could write down was without limits. The ideas, however, had to be related to the theme of the research. After 30 minutes of brain storming, the group as a whole was invited to discuss the statements on the sticky notes Based on this session, the original topic list was enriched with new items that were relevant to the study from the view of the participants. Quality of care and the private situation were factors identified in the focus group session. Interpersonal conduct (treatment by care professionals) was an important new item, and the autonomy experienced by the participants was stressed again. Haste among care professionals and the impression it leaves on care recipients is another related new theme, also referred to as a lack of focus and attention. Moreover, new care technologies do not receive much confidence from the participants and are seen as a substitute for interpersonal contact. The open gallery, which leads to the private apartments, is another item that contributes to dismay: people do not feel sheltered from the impact of weather extremes.

The final topic list was divided into two parts. The first part deals with a structured set of questions on personal details (gender, age, health status, etc.). The second part contained open questions using a topic list, which was made up of the following items (Figure 1): the sense of home in general, and its contributing factors such as own situation, social interaction with persons and animals, environment, quality of care and care professionals, quality of informal care, and autonomy. A common thread throughout the topic list was the sense of safety and security. Moreover, the interviewer asked for dos and don'ts. All topics had subtopics, and new subtopics were added to the topic list when the research progressed due to new insights. The subtopic 'informal care' was adjusted during the study as items appeared in the main stream media on the compulsory participation of informal careers in daily care tasks in the nursing homes of their loved-ones. Participants explicitly addressed this new subtopic.

Participant	Age [years]	Gender	Marital status	Duration of nursing home admission and status	Care received*	Disease/disorder	Physical and sensory limitations	Number of children	Highest completed level of education	Type of income, (sufficient? yes/no)
1	82	female	widowed	1 year, permanent stay	B	leukemia, osteoporosis, arthritis	Mobility	1 alive, 1 deceased	Primary education	Old-age pension plus additional pension, (yes)
2	73	female	divorced	6 weeks, temporary	A	CVA, diabetes type 2, cardiovascular problems	Mobility, emotional problems	1	Vocational education	Old-age pension, (no)
3	69	female	married	3 months, temporary	A	diabetes type 2, bowel problems, shoulder and knee replacement	Mobility	2	Vocational education	Old-age pension plus additional pension, (yes)
4	85	female	married	18 months, permanent stay	A	General malaise, cardiovascular problems, arthritis, osteoporosis	Mobility, vision	1 alive, 1 deceased	Secondary education	Old-age pension plus additional pension, (sufficient when cautious with spending)
5	86	male	married	18 months, permanent stay	A	CVA	Mild aphasia, hearing, mobiliy	1 alive, 1 deceased	Vocational education	Old-age pension plus additional pension, (sufficient when cautious with spending)
6	86	female	widowed	6 months, temporary	A	Complex geriatric multi-morbidity. Hip replacement	Mobility, vision, neuralgia	1 alive, 2 deceased	Secondary education	Old-age pension plus additional pension, (yes)
7	92	female	widowed	6 years, permanent stay	B	Diabetes type 2, arthritis	mobility	1	Primary education	Old-age pension plus additional pension, (no longer responsible for expenses)
8	73	male	widowed	6 years, temporary	A	CVA, cardiovascular problems	Mobility	3	University of applied sciences	Old-age pension plus additional pension, (yes)
9	76	male	married	6 weeks, temporary	A	Parkinson's disease	Mobility, aphasia, apraxia	3	University	Old-age pension plus additional pension, (yes)
10	73	female	widowed	6 weeks temporary	B	CVA, diabetes type 2, cardiovascular problems	Mobility, aphasia	3	Vocational education	Old-age pension plus additional pension, (yes)

Table. 1: Overview of participants.

*Type A: health care assessment status qualifying for sheltered housing with intensive nursing and daily care. Type B: health care assessment status qualifying for sheltered housing with intensive supervision and extensive care. The six participants who resided temporarily in a nursing home for rehabilitation had, at the time, a health care assessment status qualifying for recovery-focused nursing and care.

B. Participants of field study

A total of ten participants (Table 1) were selected for the study. Four of them resided permanently in a nursing home, and six once resided in a nursing home for rehabilitation purposes and now live in the community and receive nursing home care at home (year of residence of participant 2:2011; 3:2012-2013; 6:2011; 8:2004-2010; 9:2013; 10:2011). The respondents of this study were clients of the hosting care organization operating in the region of a middle-sized city in the south of The Netherlands. Two of the respondents (participants 2 and 10), who now receive home care from the hosting care organization, once resided in a nursing home operated by another regional care organization. Participants who were recently admitted to a nursing home or had psychogeriatric health problems were excluded from the study. Participants had to be able to understand the goal of the research and understand the questions that were being asked. Participants had to reside in a nursing home for longer than six weeks after

admission (or had resided in a nursing home for at least 6 weeks). All participants relied on nursing home care. Among the participants are individuals with somatic health problems. There was a minimum age limit of 60 years. There is a large variety in the study participants in order to get richness in data. Through this richness, the research team tried to obtain as set of many different facets of a sense of home. By having a mix of current nursing home residents and former nursing home residents, a reflection on past living experiences was introduced in the data set.

C. Interviewing

The interviews were conducted from August 6th to October 2nd 2013. Prior to the interviews, the principal researcher started an informal conversation, which lasted for 15 to 30 minutes, in order to make the participants feel more at ease. Thereafter, the interviews were conducted, which lasted for 60 to 90 minutes each. All interviews started with a direct question asking the participants about their personal sense of home and what helps in achieving this sense of home. After the interview, there was a debriefing of 10 to 15 minutes for answering questions and for another informal conversation. All participants were interviewed in their private rooms or homes, and the use of language was adjusted to the social-economic status of the participants. Some of the participants were assisted during the interviews by their (family) carers (p5 and p9 spouse; p6 son). The presence of relatives was appreciated (partly because their views were included in the study) because they also serve as a spokesperson, who can increase the validity of the study or can assist with a partner with mild aphasia. All participants signed informed consent documents, after the procedure was explained at the beginning of each interview. Prior to the interview, participants had received a letter explaining the goals of the research and the interview procedures. Official medical data were accessed with permission of the hosting care organization, the participants and their primary informal carer in order to get an adequate picture of the health status, use of medication and duration of stay on the nursing home and the reason for admission. The principal investigator works as a registered nurse and only shared the most relevant medical data with the other researchers in order to guarantee the privacy and anonymity of these data. During the interviews, observations were made of the living environment, in particular of items that can contribute to a sense of home (pictures, pets, furniture), as a type of method triangulation. Member check, by sharing the transcripts of the interviews, was applied after the sessions in order to confirm that the data obtained by the investigator were correct.

D. Data analysis

All interviews were audiotaped, and the audio files were transcribed verbatim. Notes were taken of emotions and non-verbal language. Analysis was based on 'sensitizing concepts', which gave a general sense of reference and guidance in approaching the empirical data. Whereas definite concepts provide prescriptors of what to see, sensitizing concepts merely suggest directions in which to look (Blumer 1969). Sensitizing concepts were chosen to steer the analysis, but only loosely. They do not have a full operational definition, and leave room for the researcher to find out how the concept manifests itself in the data (Schwandt 2001).

First, each transcript was read in its entirety. Thereafter, each transcript was read again and sections were coded. These coded sections were grouped in larger categories related to the themes that emerged from the interviews and topic lists. In order to become a main theme, the codes had to appear in over a quarter of the interviews, and more than once. Quotes that express the essence of a subjective experience of a participant have been included in the analysis. The analysis has been done independently by two researchers, who reached consensus about the themes.

III. RESULTS

The results of the study are presented as themes emerging during the analysis of the interviews. A sense of home was not only related to the physical environment, but to the total ecosystem of the nursing home. Major themes were: safety and security, relationships and actions, care, and living. A model was made of the sense of home (Figure 3), which includes the relevant themes and subthemes that are related to (i) safety and security, and (ii) autonomy. A sense of safety and security was an overarching theme for all themes and subthemes. The results are presented as: (i) the sense of home in general, and (ii) relationships and actions, and (iii) living, as elaborations of the basic concepts of safety and security and autonomy. These two main categories are not used for the presentation of results.

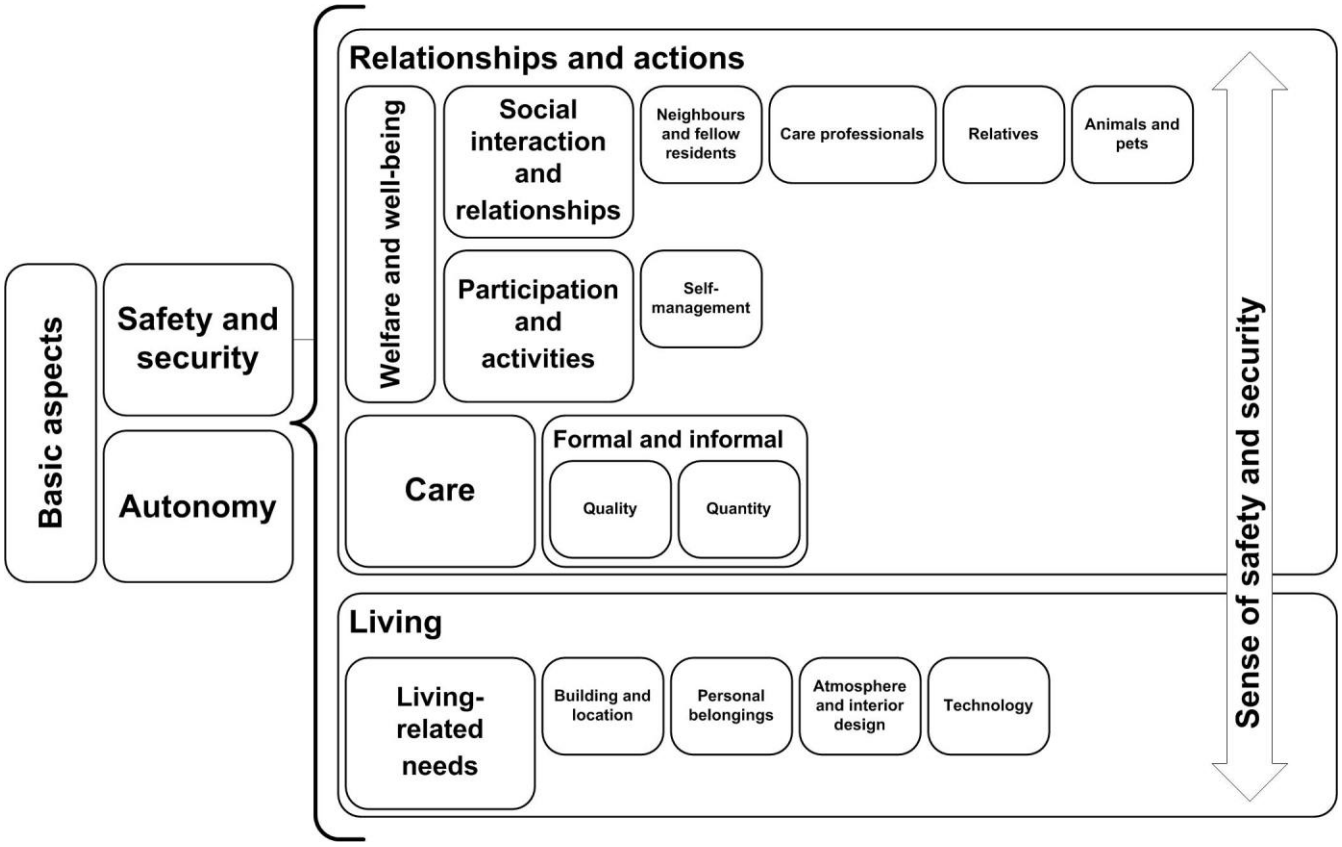

Fig. 3: Model of sense of home

A. General sense of home

The initial question of each interview on the sense of home in the nursing home led to a variety of answers, including good care, having conversations with care professionals, personal belongings, being heard, an atmospheric room, coziness, freshness and cleanliness, music, a pleasant smell, friendly people, being respected, doing whatever pleases you. When participants were asked what hinders them in getting a sense of home, the following topics were mentioned: being admitted against one's will, lack of choice, feeling unsafe, lack of motivation among care professionals, hospital-like rooms, having to live without having personal items, and being cut off from society (not being able to participate).

All ten participants stated that having a sense of home is a subjective 'feeling'. They found it hard to describe in accurate terms. To them, it was about familiarity and being attached to a setting. Being surrounded by items which have meaningful memories and social interaction with relatives, friends, fellow residents and care professionals were important, too.

"It is too abstract. I cannot describe the sense of home. You go somewhere, and thereafter you return home by car. And in the meantime you think 'it is good to be home' […] a sense of home is something you develop over time. It is constructed. Well, a sense of home in general, is that you get attached to.. [break]. What is home?" [9]

"Yes, six years without home. [deep sigh] It is the same as when you get unemployed. Then you are also cut off from society. Which I already was." [8]

"I still say, when I talk about the old days, 'when I was still at home'. No, here is where I live now. It was etched into myself. There, I was my own boss, and [I had] my own home. But I had to go here [i.e., nursing home]." [4]

"It is all about the atmosphere. [Being with my wife] and the children, that is home." [9]

A sense of home was connected with warmth and coziness. Two participants experienced a sense of home in the nursing home, and two others stated that they are used to living in the nursing home, because they had to.

"When I return to the nursing home at night, I always say: 'I go home'. […] I feel at home here." [1]

Four of the temporary residents who participated stated that the nursing home is a place which is very remote from a sense of home. One of the temporary nursing home residents described her feeling as follows:

"I think I would have jumped from the roof if I had to stay there" [2]

B. Relationships and actions

Autonomy over your own life is a multifaceted phenomenon that all participants gave different meanings to. This is illustrated through a description of the meaning of relationships, activities and interactions. The quality of care is another factor which is not dealt with in great detail in this study.

1) Relationships

Most participants mentioned the relationship to the rules of the nursing home and the practices of care professionals as steering. The treatment of the participants by others was very important. Half of the participants stated that they had experienced a disrespectful treatment. Deciding over friendship was not an automatic right either, as two participants mentioned that they were denied this right. Three participants said that for the development of a true sense of home, it was important to give consideration to your fellow residents.

"I was developing a personal relationship with a man in an electric wheelchair. He is very limited. [...] We had a lot of conversations and I thought these conversations were very interesting. Since a week, I am taken away from him. [...] I have a sense I am losing my autonomy. [...] I am now surrounded by people I do not want to relate to. […] I don't feel at ease!" [9]

Concerning the treatment of residents by care professionals, over half of the participants stated that they feel a loss of control. Coping takes place through making jokes, whereas others are hurt and feel unheard. Some respondents go as far as stating that care professionals do not consider them as real human beings (dehumanization). One of the participants stated that the treatment makes a difference in whether a care activity is seen as a breech on privacy or infringing on one's autonomy or not. Spontaneous opening of doors of private rooms is one of these actions. Five out of ten participants express a loss of autonomy in their lives or during their temporary admission. Main concerns are related to rules and scheduling/time management. Two participants say they still experience autonomy but they cannot provide examples. Participants also indicate that carers do not always live up to promises.

"When a nurse said, let us go shower now, I always answered: that is alright, go to the bathroom and get undressed. I'll be with you in a short while." [8]

"Even when preparing a slice of bread, I had to tell over and over again that I couldn't do it myself, and then [the carers] were complaining that I couldn't do it alone." [10]

"They were constantly keeping an eye on you. No matter what you did, personal notes were taken and put in your file. Even if I went out for cigarettes… They asked: 'What are you going to do now?'" [...] Autonomy, not really. Sometimes, people enter your room. [...] Curfew is the worst. I had to be in at 11. I felt like an under-aged child. [8]

"Autonomy? Not at all. [The carers] were in charge. All you could do was to say yes and amen." [2]

There was a discrepancy in what participants answered to direct and indirect questions. When asked directly, three participants stated they were satisfied. When asked indirectly, participants expressed uncertainties. Eight participants spoke of the rules and regulations and the way these rules impact their sense of autonomy. Most showed signs of resignation over these conditions. However, these feelings did impact the sense of home in a negative manner. This is illustrated by the following quote, when asked what hampers feeling home in a nursing home.

"You have to adjust yourself, and that is the way it is. You are dependent on others, you cannot just go and do whatever you did at home." [3]

When participants were given a voice in making decisions or were given certain responsibilities, they noticed differences in perceived autonomy. Four participants valued making shared decisions about their medication regime.

"It gives me a feeling of being independent. I take care of my own medication. I keep a strict eye on it, it is one of the few things I can still do myself, fortunately." [4]

2) Activities and participation

Nine participants shared their views on daycare activity programs. Only two nursing home residents expressed their appreciation for these programs. The main reasons for joining are the therapy itself, not being alone or battling loneliness, being occupied, and being away from the own home. The activities are seen as a necessary and pleasant break during the day.

"I like the activities. It keeps you occupied. [When home], there is not much you do. Then you need some distraction, else you sit in your chair all day long. That would bother me." [1]

Nursing home residents had to contribute to the costs of these programs, which in the view of two participants was unreasonable because they felt entitled to these services. The quality and frequency of services was perceived in a different way. One participant had no interest in the activities that are offered. Three participants stated that they do not want company around: in two cases this refers to the social interaction between care professionals / activity facilitators. Participants who completed higher education mentioned that the activities do not match with their personal interests. Apart from rehabilitation exercises, there are no fitting daycare activities that met the needs of persons with a severe physical limitation, such as, after a cerebrovascular accident. Their sense of autonomy decreased, and participants then started to worry and mull. The participants who stated they had rather be alone also stated that they think that watching other older persons or people with a physical limitation was depressing.

"They have no idea what it means to paint. I then think: I need to get out. I don't know what they expect of me when I am around." [9]

"No, I did not participate. They had these craftwork afternoons, but that is unsuitable for people who can use only one hand, so I went no longer." [8]

"The financial cuts in activities are an obstruction to me." [7]

"There were lots of activities, but I did not join them. I'd rather stay in my own place, and do a little reading and puzzling." [3]

The most important observation is that the majority of activities were offered to the residents on a group basis. Customized activities, for instance, individual activities with relatives, would offer a solution for those seeking more private forms of engagement. New technologies may facilitate the desire for more individual activities.

Two participants stated that they preferred individual activities over group activities in day care. Some of these activities take place on a personal computer, and the participants get help from relatives.

"It keeps you up to date, mentally. I can send e-mails. [...] I use cheat sheets, which I take when I am stuck. Else I forget how [the computer] works." [4]

"Let me tell you one thing. My granddaughter was with me one time, because I had asked her to come explain something. Well, she did it quickly, and then she asked me: 'Do you understand grandpa?' Well, I'm still slow." [5]

Three participants living in the nursing home stated that outings and holidays were important, both for them personally but also for increasing a sense of autonomy. During these breaks they can see a different environment and get new impressions. Going outside (for a walk) is also seen as an outing.

3) Social interactions

Eight participants stated that having a pet around can make life better. An animal gave a sense of consolation and warmth, and makes you feel less lonely. One participant stated that walking a dog gets you into touch with others. Two participants did not care for animals, and one of them does not want them around or indoors. Three participants explicitly mentioned that the dog or cat needs to be privately owned, and not an animal that belongs to the ward. All eight participants realised that taking care of a pet is impossible due to their health status. Getting help from a volunteer in looking after a pet is an option none of the participants has thought about. One respondent did not want another pet, out of fear of losing the animal.

"It used to be so nice, such a warm animal next to you. I used to have a cat, we used to have it on the boat […] but it is impossible to have one here. I can't look after [a cat]." [1]

Seven participants mentioned the relevance of social contacts with the neighbors and fellow residents when asked. These interactions mainly take place during activities that are being organized by the nursing home, or during mealtime. Two permanent residents (respondents 1 and 5) are not actively pursuing new relationships with fellow residents. One of them actively avoids them, because he is afraid to lose people again. Two others stated that they do not seek contact with neighbors because of the differences in social economic status or because of differences in cognitive status (both participants have depressive symptoms, respondents 9 and 10). The social interactions with care professionals and fellow residents have an impact on what participants see as autonomy. Seven participants stated that if they have no choice in who to relate to, these forced and sometimes unwanted relationships breech their sense of autonomy. Some people show evasive behaviors. Some participants experience a greater sense of autonomy and sense of safety and security in a nursing home environment when they are not forced into engaging with fellow residents. This can be evasive behavior too. One of the participants mentioned that she got lonely because of a lack of interpersonal interaction.

"If they could eat decently. Sometimes I was so hard to watch. They cannot help it, but I'd rather eat not on that table." [3]

"I went away with a taxi service. I left in the morning and I came back in the evening. […] I fled."[2]

"Yes, yes, I am pleased to lock the door at the end of the day. I then think to myself, this is crazy." [1]

"I thought the days lasted for so long. You only see the nursing assistants bring along food, and when you need some personal care. There is a little alarm device that you can ring when something is wrong. […] You see other people from a distance and that is all. When you are in a group space, you tend to see other people, but [down in your own room] you are actually very alone." [6]

Nine of the participants stated that the frequency of interactions with friends and relatives declines while residing in a nursing home. Only one person has as many visitors as when still living at home. The decline in visits is an unpleasant experience for all. Eight of the respondents give similar answers when asked why the frequency decreases. Children live far away or are busy, friends and acquaintances have an impaired mobility, people have passed away, and existing bonds are becoming less intensive. Two participants stated that the smell in the nursing home might play a role too, but are not sure about that. Having social interactions with relatives and friends keeps some of the participants going. The lack of contacts, or the (partial) ending of these contacts is a fact that poses great challenges for the nursing home residents. Some of the participants feel a sense of rejection.

"People in the neighbourhood all said, we will come visit you. They show up only once and then stay away. It is so hard. It is all a lot less." [4]

"My children don't come visit me every week or weekend. They are entitled to spending some time in a petting zoo with their child, or have a walk in the woods when the weather is nice, and I understand damn well, that they don't have time then for the old one." [8]

Five of the participants stated that it should be possible to move into a nursing home with a partner. People do not want to be split up after a long marriage by the admission of one of the two partners. The remaining partner often has great difficulties in visiting the nursing home her/himself, as they are often dependent on care and assistance. But living together in a nursing home can also be disadvantageous according to one of the participants.

"If you have been living together for so long, and you are split up, then I say no! You shouldn't do that." [8]

"And at a given time you start to get annoyed with one another. Probably it is mutual too. I say in honesty that we have never had so many quarrels as when we came live here." [4]

C. Living

Aspects of the built environment and interior design are described in terms of personal belongings, building and location, atmosphere and interior design, and technology.

1) Personal belongings

Having personal belongings around you is an important but not the only important factor in creating a sense of home. Some residents are content in having a couple of pictures around and a chair, whereas others want to bring along more pieces of furniture, and make improvements to the interior design of the common living room by introducing personal items. The most frequently mentioned items were pictures, postcards and some small pieces of furniture. Music and 'atmosphere' were mentioned as important factors that contribute to a sense of home.

"I had three book shelves at home, and I gave them away to someone else, to a missionary. These books were my friends." [10]

"My personal belongings are very important, without them it feels just like a hospital. Modern furniture? No, I don't like that." [7]

"I think personal belongings are a necessity. It feels more furnished, else it is so empty. The room was already full, because there was a table, and a chair, and a wardrobe, and I did have a sink, but not all of my fellow-residents have one. [When the room is] furnished it feels more like home." [3]

"You feel like home when you can do whatever you want to do. Grab your own belongings, or a book whenever you want to read. Or play music when you want to listen to music. Or paint a painting when you want to. You can bring along your personal belongings, but it is still not like home." [9]

Personal belongings are an essential part of getting a sense of home, but there is more to it. Activities and interactions were also important factors.

"Personal belongings help a little. So does a pet, and your long-time friends and relatives who can visit you on a regular basis. and now my grandchildren too. So nice." [8]

"My personal belongings [contribute to a sense of home]. It is a bit crowded though, but well, and of course your own furniture." [1]

"I wish this room was furnished a bit nicer, a bit brighter and more colors, more furnished and just a little cozier. If I have my books around and my personal belongings I can keep myself occupied, even in a hospital or nursing home." [6]

One couple stated that the most important to them was the fact they could bring their own computer. Participant 5 also mentioned his computer as being important.

"You can see my computer over there. Doing nothing drove me crazy. My television preferences are different. I like to watch quarrelling on tv. […] I used to hate computers, but now I have the feeling that I want to engage in computer activities. It makes you stay up to date mentally. […] You already have to give up so much." [4]

There is a difference between the perception of what permanent and temporary residents need. Temporary residents know that the period of admission is limited, and, therefore, are less attached to personal items. All temporary residents stated that they would want to bring along more personal belongings if they were to stay on a permanent basis.

"Yes, and I did bring a lot of personal items with me, like pictures and postcards which were put on the wall. I also brought in plants. That was it, because it was just a temporary stay." [3]

2) Building and location

The participants did not place much value on the architectural appearance of the nursing home. Only two participants mentioned that the nursing home "should not look like a monastery!" [8] or "should look inviting" [3].

The participants were clear in relation to the location. The preferred location was in the own home town and preferable in the old neighborhood. The presence of loved ones and children plays a role in this preference. Opinions on the views from the nursing home varied. Three participants preferred a green environment (park or forest) over a built-up area. One of the participants wants to have a view of a lively street. Another participant wants to have a room with a view on a lively street, but a quiet zone bordering the bedroom area. One of the participants wants a view without older people, although he is old himself. One of the participants does not place much value in the view.

"My garden meant the world to me. I was a freak. I loved it so much. There needs to be a lot of green surrounding me." [10]

"I don't want view of older people. I'd rather see a petting zoo. […] Watching a bunch of animals and children is always fun. And of course the young mothers…" [8]

"I don't care for the view. I used to lie on a boat, and then all you see is water." [1]

3) Atmosphere and interior design

All ten respondents have statements about the interior design of the private rooms or apartments and these statements pertain to small changes to the rooms and the interior design and perceived architectural failures. A private room with private sanitary facilities is considered a must by all.

"Those rooms are actually quite decrepit, which are not suitable for habitation. […] The room was not measly, but it had no direct windows. These windows bordered the corridor. […] The place is stinky during visits, because I sleep and eat here. Everything happens inside this room, and there are no windows for ventilation. Nothing […] There is no private toilet, no private bathroom. He starts to wander at night when he needs to use the toilet. He wanders in circles on the circular corridor. And then he can no longer find back his room. […] I'd rather place him in a prison cell. I'm not joking." [partner of 9]

Having a separate bedroom or recess for sleeping is considered important by nine of the participants. According to one of the participants, sharing a single room with a fellow resident is acceptable in case of a temporary admission, as long as the character of this person is compatible. The presence of a pantry or a kitchen is considered desirable by three participants. Nine participants ask for more spacious rooms, in particular the shower and kitchen areas. Mirrors should be placed in such a way that they can be used for persons in a wheelchair. All rooms in the nursing home and the apartments themselves need to be accessible, and the orientation in a building should be self-explicatory. Having social interaction with your neighbours should be facilitated through the design of the building.

"I would like a small kitchen and a considerable room and a bedroom […] I'd consider that to be quite primitive, but it is better than nothing. Then you have room you can decorate, and a neat bedroom. That is the least one can wish to feel at home." [6]

"Did I ever shower in there? I think I did. Or not? It must have been really hard [...] The wash room is difficult to access for persons who cannot walk, just like me in my wheelchair. It is all too small and cramped." [6]

"You can only get in and out through a single door. Someone needs to hold the door for you. […] Before someone has opened the door when the receptionist is gone, you have already wetted yourself. [...] Sliding doors are ideal, and even better would be an electric door." [8]

"Whenever you want to leave the house, you need to go down, and you pass through an open gallery. When this gallery would be behind the facade, there would be long corridors, and there would be many open doors which allow you to have a short conversation. This is out of the question in this building. I don't even know my neighbors." [4]

The atmosphere of a place is connected to the interior design and the architecture of a building. Some of the participants mention daylight, colour and a 'fresh' appearance without smelly odours as being important. Creating a hospital-like environment is something all participants want to avoid.

"In a new home, colours are important. In autumn, there are autumn flower arrangements and in spring, there are tulips. It is never nice when you need to leave home, but there is always a way to make things nicer and more acceptable." [9]

"In one nursing home it was quite dark, there was no daylight access. In the other nursing home there was a lot of light, it was more spacious, and I had a sense of luxury. [...] It gave a much better feeling. It was so dark [in the first nursing home] and the table was so small and placed away in a corner. It was impossible to watch TV, as it was placed in a corner too. So inconvenient. […] Well, that room was so dismal; you simply couldn't feel at home." [6]

"Stench is an item that needs to be solved, I really think so. I sort of got used to it." [6]

4) Technology

When in need for assistance and care, six participants stated that they preferred receiving this help from a care professional instead of via technological solutions. A carer is a point of contact and provides a sense of privacy and safety and security. A machine for putting on compression stockings, for instance, is appreciated but at the same time carers are very quick at putting them on, too. Technological solutions, which are already used by the participants, are of a different league: necessary for mobility or to ask for help after a fall incident. Some technologies which were already in use are considered to be acceptable, whereas future developments were approached with skepticism.

"A machine that assists with showering? Well, I think not! I prefer a nurse. Camera surveillance? Well, I don't want to think about it. I still want to have some degree of privacy. Please give me an emergency button <personal emergency response system>." [9]

"An electric wheelchair is a necessity and practical. I can't live without." [8]

IV. DISCUSSION

The results of this study confirm findings from earlier research that a sense of home is a multifaceted phenomenon, which stretched beyond the realm of housing and the built environment. This study further elaborated the concept of autonomy and safety and security. This study showed that the residents of nursing homes prefer a built environment which is bright and friendly in appearance, in which they have adequate space to live with the consequences of physical impairments and to have visitors stop by. There should be sufficient space for personal belongings. Technological solutions in these spaces need to be demand-driven. In relation to well-being, nursing home residents need to experience a sense of safety and security, and feel respected as an autonomous individual. It is, therefore, of the utmost importance that they can spend their days in a meaningful manner, with

activities tuned to their personal needs and limitations, and their social and educational status. Nursing home residents are human beings like all of us, and need social interactions and signs of affection. Their treatment should be respectful and considering one's personality. Whenever residents can do small tasks themselves, they should be encouraged to do so, but if they no longer can, assistance should be given in a considerate and adequate fashion.

All these facets of acquiring a sense of home came to the fore in the current study, and form a further elaboration of the theoretical framework laid out by Van Steenwinkel, Baumers and Heylighen (2012). Our participants clearly stated that these two elements are crucial and deeply missed when absent. According to Choi, Ransom and Wyllie (2008), a bad nursing home milieu can lead to depression, including the loss of independence,a lack of privacy and frustration at the inconvenience of having a roommate and sharing a bathroom. According to Falk *et al.* (2013), a sense of home in residential care involves strategies related to three dimensions of the environment, namely, the attachment to place, to space, and attachment beyond the institution. The concept of place-attachment involves emotions, cognition, knowledge, beliefs, behaviours and actions. Attachment to place is believed to help create a sense of home and maintain self-identity, supporting successful adjustment to contingencies of ageing. This study showed that a sense of home encompasses more than just the environment.

A. Living in a nursing home

There are still rooms in nursing homes in which two or more residents are housed, as well as rooms without direct access to daylight or private sanitation. A sense of home cannot develop in suboptimal conditions: a nursing home room becomes something of a shelter, but not a home with all of the positive connotations. When sharing a room with a fellow-resident, there needs to be a connection between the two residents. When this happens, a sense of home can emerge. Privacy is an issue which is hard to realize in many nursing homes, especially when facilities are shared. Not being able to use sanitary equipment due to physical impairments is a factor which is accepted reluctantly, but certainly is not a contributing factor to the development of a sense of home. Perhaps this can be explained due to the progressive state of hospitalization of these residents, and their personal coping strategies. At the same time, it does not contribute at all to the improvement of a sense of autonomy, despite the fact that autonomy is often mentioned in the vision and mission statements of many nursing home organizations. Bradshaw, Playford and Riazi (2012) suggested that care home workers may view quality of life differently from the mission statements.

Ideally, a nursing home should have a living and bedroom space and a separate bathroom facility, which accommodates the wishes for some degree of autonomy in carrying out (instrumental) activities of daily living and privacy. Hauge and Kristin (2008) found that Norwegian residents spend most of their time in the common living room. Despite having single rooms and more home-like interior decoration, the residents still have reduced opportunity to develop a private everyday lifestyle. Therefore, the living room should also be considered in the quality of life schemes in nursing homes. Permanent residents of nursing home ask for more surface area and space than persons who reside in a nursing home on a temporary basis (rehabilitation). In practice, however, there is no apparent distinction in the way differences in housing needs between permanent and temporary residents are met. There were of course differences between older and newer buildings in terms of how adequately these facilities were designed: having to share a room in the older facilities, versus difficult access of bathrooms in newer facilities. Both old and new facilities were not designed according to the principles of user-centred design. Open galleries for transportation are another limiting factor in the physical design of a nursing home building: they prevent people from going outdoors in winter and seek social interaction with fellow-residents. So does an early closing time of the central front door. These architectural design flaws and operational constraints do not contribute to a sense of home or quality of life. In general, nursing home residents have an opinion about these errors in architectural design and interior design, but are not outspoken towards the care professionals. In our view, this may be due to a dependency on the healthcare organization and the less outspoken generation they belong to. In a few cases, the facility managers provide solutions for these errors. In other cases, residents simply cope with the conditions.

At-homeness, according to Molony (2010: 305), "*is an experience of dynamic person-place integration created in cycles of closing one door, opening another, nesting, and moving the reconciled self forward into future possible relationships with time, space, people, activities, and meanings*". Van Steenwinkel, Baumers and Heylighen (2012) further cited the work of Bollnow (1963), who referred to the fundamental double movement of going away and coming back by dwellers, as a description of how autonomy and security are reflected in physical space. In relation to Dutch nursing homes, there is a population for whom the nursing home is a final setting in one's living career (van Hoof, Kort, van Waarde 2009). At the same time, there are also a number of persons residing in nursing homes for rehabilitation purposes. Mobility impairments are a seriously impact the double movement of going away and coming back.

Nursing home residents are especially attached to their personal belongings, because these items represent memories from the past. Still, this study found that personal belongings do not contribute to a sense of home per se, as other factors are as important to a sense of home as are personal items. Moreover, personal items can make nursing home residents feel nostalgic or make them long for a life long gone. Home is no more but a memory, a place where one used to live and where people made a connection between the personal item and an emotion (Heywood 2005). It is in the old home where persons made a connection between memories and personal items that are now moved to a nursing home. In this fashion, personal items can actually make it painfully clear to residents that the house they now live in is no longer the old home. In order to have a sense of home, residents should be able to feel connected to the nursing home environment (Heywood 2005). Van Steenwinkel, Baumers and Heylighen (2012) stated that people need to have a sense of autonomy and safety and security in the broadest sense of the words, in order to

connect to a new house. In order to feel at home, nursing home residents need to start making new memories in their new environment, for instance, via social interactions.

B. Social interactions, self-worth and autonomy

In relation to social interactions with both care professionals, neighbors and fellow-residents, relatives and friends, nursing home residents felt they don't meet their needs in terms of intensity and frequency. These social interactions are very important for the sense of self-worth and a sense of happiness. Feelings of depression and loneliness can be diminished through sufficient social interactions (Stevens 2013). These interactions also contribute to an improved resilience in old age (Janssen, Van Regenmortel and Abma 2011). Pets are mentioned by some as a source of consolation and joy, and of course, social interaction.

The autonomy of nursing home residents is still insufficient. If these residents need to develop a sense of home, then freedom and autonomy are key elements to success. Therefore, autonomy is often mentioned in the vision and mission statements of nursing home organizations. In this study, it was found that few skills of residents were exploited in stretching the autonomy of residents, for instance, through care professionals taking over tasks.

In the light of this study, it seems that technological solutions are rejected when unknown to the residents. Sponselee (2013) demonstrated that in case of telecare, acceptance among older users is suboptimal due to a lack of user-centred design and implementation. Therefore, the implementation of new technologies in nursing homes should specifically target the improvement of autonomy and, in particular, the self-care skills of residents. Residents in this study reported that technology is also rejected because it would decrease the social interaction with nursing assistants. Two of the residents showed that their social interactions increased through their use of social media. Given the future cuts in nursing home spending, and the increase in care needs of residents, the social interaction with care professionals comes under increased pressure. Therefore, technologies that can improve social interaction should be studied as a substitute for the lack of social interaction of nursing home residents if interactions cannot be organized in another way. Only then, nursing home residents can start to feel at home.

C. Strengths, limitations and applicability of the study

The main strengths of this study are the fact that the researchers have investigated the views of actual nursing home residents. Moreover, we based this study on existing knowledge from the literature and we used the input of a focus group session to improve the topic list. Another strength is the mix of male and female participants, and a mix of permanent and temporary residents (some of whom have already returned home and can better reflect on the period in which they lived institutionally), which all contributes to a richness of data and a more critical (on thus more honest) perspective.

There are a number of limitations to this study. First of all, this study contains a limited number of participants, and their sense of home has been studied within the cultural context of The Netherlands and the national healthcare system. Data saturation has not been reached, although many discussion points were shared by the participants so that the validity of data can be assured.

The impact of this study and its applicability will be mainly in the field of quality process improvement of care and in the design of nursing home buildings and the implementation of new technologies. Care organizations can use the findings to improve the daily activities and care they offer to their residents.

V. CONCLUSION

Autonomy and safety and security are the basic aspects for the development of a sense of home. These aspects refer to the relationships and actions of nursing home residents and the environment in which people live. The balance between autonomy and safety and security is fragile, as nursing home residents have limited options to control the parameters influencing these basic aspects. At the same time, the frail health status of nursing home residents and the fact they do no longer live right in the heart of the community makes them at risk of loneliness and getting detached from home. Developing a sense of home encompasses much more than just being surrounded by personal belongings and having a private room with certain facilities. Subjective components of relationships and (inter)actions are as important as the physical component living and housing. Only when a right balance is achieved between all factors, a true sense of home, albeit away from the familiar home someone spent most of his/her life, can be developed. In order to return some of the autonomy to the residents, privacy needs to be respected (preferably in a single-person room with sufficient space), and the home rules should be less directive but a reflection or set of shared rules and values.

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REFERENCES

[1] Andrews, G.J. 2000. Towards a more place-sensitive nursing research: an invitation to medical and health geography. Nursing Inquiry, 9, 4, 221-38.

[2] Angus, J., Kontos, P., Dyck, I., McKeever, P. and Poland, B. 2005.The personal significance of home: habitus and the experience of receiving long-term home care. Sociology of Health & Illness, 27, 2, 161-87.
[3] Bergland, A. and Kirkevold M. 2006. Thriving in nursing homes in Norway: Contributing aspects described by residents. International Journal of Nursing Studies, 43, 6, 681-91.
[4] Blumer, H. 1969. Symbolic interactionism: Perspective and methods. University of California Press, Berkeley and Los Angeles, CA, USA.
[5] Bollnow, O.F. 1963. Raum und Mensch. Kohlhammer, Stuttgart, Germany [in German]
[6] Bradshaw, S.A., Playford, E.D. and Riazi, A. 2012. Living well in care homes: a systematic review of qualitative studies. Age and Ageing, 41, 4, 429-40.
[7] Choi, N.G., Ransom, S. and Wyllie, R.J. 2008. Depression in older nursing home residents: The influence of nursing home environmental stressors, coping, and acceptance of group and individual therapy. Aging & Mental Health, 12, 5, 536-47.
[8] Cooney, A., Murphy, K. and O'Shea, E. 2009. Resident perspectives of the determinants of quality of life in residential care in Ireland. Journal of Advanced Nursing, 65, 5, 1029-38.
[9] Coughlan, R. and Ward, L. 2007. Experiences of recently relocated residents of a long-term care facility in Ontario: Assessing quality qualitatively. International Journal of Nursing Studies, 44, 1, 47-57.
[10] Critical Appraisal Skills Programme (CASP) Qualitative Research Checklist 31.05.13 Oxford, UK. http://www.casp-uk.net/wp-content/uploads/2011/11/CASP-Qualitative-Research-Checklist-31.05.13.pdf
[11] de Guzman, A.B., Guevara, K.I.J., Guiang, F.J.B., Gutierez, A.L.I., Hubaluyas, A.S., Hizon, M.A.P. and Idanan, S.G. 2012. Home away from home: Acclimatization of Filipino elderly from being home to a sense of being "at home" in an elderly institution. Educational Gerontology, 38, 11, 799-811.
[12] Falk, H., Wijk, H., Persson, L.O. and Falk, K. 2013. A sense of home in residential care. Scandinavian Journal of Caring Sciences, 27, 4, 999-1009.
[13] Fiveash, B. 1998. The experience of nursing home life. International Journal of Nursing Practice, 4, 3, 166-74.
[14] Gillsjö, C., Schwartz-Barcott, D. and von Post, I. 2011. Home: The place the older adult can not imagine living without. BMC Geriatrics, 11, 10.
[15] Hauge, S. and Kristin, H. 2008. The nursing home as a home: a field study of residents' daily life in the common living rooms. Journal of Clinical Nursing, 17, 4, 460-7.
[16] Heywood, F. 2005. Adaption:Altering the house to restore the home. Housing Studies, 20, 4, 531-47.
[17] Janssen, B.M., Van Regenmortel, T. and Abma, T.A. 2011. Identifying sources of strength. Resilience from the perspective of older people receiving long term community care. European Journal of Ageing, 8, 3, 145-56.
[18] Johnson, R., Popejoy, L.L. and Radina, M.E. 2010. Older adults' participation in nursing home placement decisions. Clinical Nursing Research, 19, 4, 358-75.
[19] Kahn, D.L. 1999. Making the best of it: Adapting to the ambivalence of a nursing home environment. Qualitative Health Research, 9, 1, 119-32.
[20] Lawton, M.P. 2001. The physical environment of the person with Alzheimer's disease. Aging & Mental Health, 5, Supplement 1, S56-64.
[21] Lee, V.S.P., Simpson, J. and Froggatt, K. 2013. A narrative exploration of older people's transitions into residential care. Aging & Mental Health, 17, 1, 48-56.
[22] Marshall, E.and Mackenzie, L. 2008. Adjustment to residential care: The experience of newly admitted residents to hostel accommodation in Australia. Australian Occupational Therapy Journal, 55, 2, 123-32.
[23] Molony, S.L. 2010. The meaning of home. A qualitative metasynthesis. Research in Gerontological Nursing, 3, 4, 291-307.
[24] Schwandt, T.A. 2001. Dictionary of qualitative inquiry. Sage, Thousand Oaks, CA, USA.
[25] Sponselee, A. 2013. Acceptance and Effectiveness of telecare Services from the end users perspective. Eindhoven University of Technology, Eindhoven, The Netherlands
[26] Stevens, N. 2013. "Aging well "in the 21th century: a psychosocial perspective. Tijdschrift voor Gerontologie en Geriatrie, 44, 3, 104-11.
[27] van Hoof, J., Kort, H.S.M. and van Waarde, H. 2009. Housing and care for older adults with dementia. A European perspective. Journal of Housing and the Built Environment, 24, 3, 369-90.
[28] van Hoof, J., Wetzels, M.H., Dooremalen, A.M.C.,Wouters, E.J.M., Nieboer, M.E., Sponselee, A.A.M., Eyck, A.M.E., van Gorkom, P.J.L.M., Zwerts-Verhelst, E.L.M., Peek, S.T.M., Vissers-Luijcks, C., van der Voort, C.S., Moonen, M.J.G.A., van de Vrande, H., van Dijck-Heinen, C.J.M.L., Raijmakers, T.E., Oude Weernink, C.E., Paricharak, N., Hoedemakers, C.G.J.J., Woudstra, J.M.M., van der Voort, L., van de Werff, T.C.F., van der Putten, B. and Overdiep R.A. 2014. Technological and architectural solutions for Dutch nursing homes: results of a multidisciplinary mind mapping session with professional stakeholders. Technology in Society, 36, 1-12.
[29] van Hoof, J., Wetzels, M.H., Dooremalen, A.M.C., Nieboer, M.E., van Gorkom, P.J.L.M., Eyck, A.M.E., Zwerts-Verhelst, E.L.M., Peek, S.T.M., van der Voort, C.S., Moonen, M.J.G.A., van Dijck-Heinen, C.J.M.L., Weffers, H.T.G., Overdiep, R.A., Aarts, S., Vissers-Luijcks, C. And Wouters E.J.M. 2014. The essential elements for a nursing home according to stakeholders from healthcare and technology. Perspectives from multiple simultaneous monodisciplinary workshops. J Housing Elderly, (doi:10.1080/02763893.2014.930365).
[30] Van Steenwinkel, I., Baumers, S. and Heylighen, A. 2012. Home in later life. A framework for the architecture of home environments. Home Cultures, 9, 2, 195-217.
[31] Wapner. S., Demick. J. and Redondo, J.P. 1990. Cherished possessions and adaptation of older people to nursing homes. The International Journal of Aging and Human Development, 31, 3, 219-35.