

The Perspective of Residents Living With Dementia Toward Their Built Environment: A Walking Interview Study in German Nursing Homes

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Abstract

Background and Objectives: In long-term care, the built environment can help residents maintain activities of daily living and thus positively influence their quality of life. The adequacy of the built environment can be systematically assessed using assessment tools. The German Environmental Audit Tool (G-EAT) was translated and psychometrically tested for the German setting. Previous research has shown that the perspective of people living with dementia has not been fully considered in this adaptation. To explore the residents' perspective, the question of how residents living with dementia experience the built environment of nursing homes was investigated.

Research Design and Methods: Walking interviews were conducted with residents. Inclusion criteria for participation were the presence of dementia (medically diagnosed or indicated by symptoms) and the ability to express themselves verbally in German. For data analysis, the audio material was transcribed and supplemented by the researchers' field notes and photographs. Data analysis followed an interpretative phenomenological approach.

Results: Fourteen residents from 2 nursing homes participated in the walking interviews. A total of 3 themes were identified: (1) being able to maintain the feeling "to refurbish" or having to let it go, (2) experiencing the limits and potentials of being independent because of the built environment, and (3) living in a community of residents.

Discussion and Implications: The perspective of the living environment of people living with dementia in nursing homes adds to the knowledge of assessment-based data. Boundaries between physical and social environments are experienced as fluid by residents. They do not see their living space as limited to their living unit but describe the nursing home as a living environment. This broadens the perspective of existing structural definitions in the setting.

Translational Significance: The nursing home's built environment is a key factor in dementia care. However, there is little evidence-based knowledge about how people living with dementia perceive their living environment in this setting. To contribute to this body of knowledge, this study used walking interviews. The results indicate that people living with dementia experience the built environment with different boundaries as acceptable, supportive, or inhibiting. These findings help to reflect on current definitions of the living unit as a living environment, extend the knowledge gathered through environmental assessments, and reinforce the need for participatory approaches in planning renovations around the nursing home.

Keywords: Alzheimer's disease, Housing, Institutional/residential care, Long-term care, Qualitative research methods, Space

Background and Objectives

In the field of dementia care, the built environment has long been recognized as a key factor (Chaudhury et al., 2018). Both in-home care and in residential long-term care, it can contribute to residents' capabilities in activities of daily living (Fleming & Purandare, 2010) and thus to their quality of life (Fleming et al., 2014). Identifying dementia-specific environmental features is the first step in contributing to this

outcome. Much work has already been done in the interdisciplinary field of health care research (e.g., Harrison et al., 2022; Narsakka et al., 2022; Sloane et al., 1998) but also by architects, planners, and designers (e.g., Calkins, 2018; Quirke et al., 2021). This growing body of knowledge has been incorporated into literature reviews (Harrison et al., 2022; Woodbridge et al., 2018) and various assessment tools to capture dementia-specific characteristics of the built

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environment (Calkins et al., 2022; Elf et al., 2017). Using this knowledge can guide the (re)designing of care settings and inform studies to develop and evaluate dementia-specific interventions.

In the absence of a reliable and valid assessment tool for German long-term care environments, we previously faced limited opportunities to learn about the built environment as a contextual factor in studies conducted in nursing homes (Palm et al., 2014). Therefore, we adapted an existing assessment tool that has been shown to be reliable and valid and whose underlying design principles are consistent with dementia care in the context of the German long-term care system—the Environmental Audit Tool—High(er) Care (EAT-HC; Fleming & Bennett, 2015, 2017).

We involved health care researchers and long-term care practitioners specializing in dementia care in adapting the original tool into a validated and culturally appropriate version for our context—the German Environmental Audit Tool (G-EAT; Fahsold, Fleming et al., 2022). The tool was then tested in German nursing homes to assess feasibility and reliability, involving the interdisciplinary care team (Fahsold, Schmüdderich et al., 2022). Adaptation and testing activities revealed that there may be environmental features important to residents living with dementia in nursing homes that are difficult to assess systematically with an instrument such as the G-EAT. In a focus group with long-term care practitioners about needs to adapt the EAT-HC for the German setting, for example, they questioned whether a rater-defined cutoff score for what constitutes visual clutter would be the same as that of residents and might also vary between their individual perspectives (Fahsold, Fleming et al., 2022). Our findings are corroborated by Fleming and Bennett (2015), who identified items of the original instrument—the EAT-HC—that were difficult to score objectively (inter-rater reliability <70% agreement or Kappa <0.2), such as questions about appropriate lighting (EAT-HC supplementary items 5b-i) or unpleasant odors (EAT-HC supplementary item 4g), and thus were not included in the instrument but were published for consultation purposes (Fleming & Bennett, 2015, 2017).

This potential knowledge gap regarding residents' perspectives on dementia-specific environmental features, or potential differences between their lived experience of the built environment and its dementia sensitivity as identified by an assessment tool, could have implications for research and residential long-term care practice. As the subsequent goal of developing care interventions is to implement them in a sustainable manner (O'Cathain et al., 2019; Skivington et al., 2021), it is necessary to assess contextual factors such as the built environment as deeply as possible and alongside the perspective of those for whom the intervention is intended (Thomas, 2014). In dementia care, knowing what residents define as their living environment and their environmental preferences can improve their understanding of behaviors and subsequent provision of person-centered care (Fazio et al., 2018).

The body of knowledge about how people living with dementia view the built environment is growing, reinforced by the call from dementia activists for active participation in research (e.g., Ong et al., 2023; Roberts et al., 2020). In long-term care facilities, this demand is often difficult to meet due to the vulnerability of residents living with dementia in an institution and access to them. However, in recent years,

there have been research efforts to learn more about the perspective of residents living with dementia in a nursing home. Although some studies catch the built environment in exploring the overarching topic of living in this setting (Mjørud et al., 2017), others focus on specific elements linked to the built environment, such as personal possessions (van Hoof et al., 2016) or living in a group home for people with dementia (van Zadelhoff et al., 2011). We can build on these findings to improve long-term care environments. However, long-term care environments differ globally, for example, in the provision of care or regulations linked to dementia care. For example, in Germany, unlike many other countries, nursing homes are open houses, and most residents can decide for themselves where to stay within the whole facility and around the neighborhood (Fahsold et al., 2023).

Research Design and Methods

Aim and Research Question

The aim of our study was to explore the perspective of residents living with dementia on the built environment of the nursing home in which they live. The results should contribute to the existing body of knowledge on dementia-specific design in residential long-term care from the direct perspective of residents. In conducting this study, we wanted to identify the elements of the built environment that residents themselves associate with this concept and as relevant to them. The following research question was formulated to be answered by our study: *How do residents living with dementia experience the built environment of the nursing home in which they live?*

The study is reported in accordance with the Standards for Reporting Qualitative Research (O'Brien et al., 2014).

Research Methodology

The study is based on a social constructivist paradigm (Berger & Luckmann, 1980), as we attempt to come closer to an understanding of how residents living with dementia experience the built environment in nursing homes and make sense of it for themselves. Therefore, we collected and analyzed data using a phenomenological approach. To account for the symptoms of dementia (in the experience of reality, as well as in the communication about that experience), we chose a refined approach to Heidegger's interpretive phenomenology by van Manen (1997). Heidegger emphasized that starting from the experience of a human being is highly relevant to how we understand our world. Van Manen refers to this when he points to lived space, along with lived time, body, and relationship, as an aspect that is essential to the understanding of lived experience (van Manen, 2014). His openness in the use of data collection methods allows for the use of augmentative data material to include residents' noncommunicable information in the analysis (Rodriguez & Smith, 2018). For this study, this information consists of facial expressions and gestures (e.g., smiling or touching an object in the environment) that we captured during the interview, especially when interacting with the built environment.

The walking interview method was chosen for its advantages over a "traditional" interview situation, both for the topic of the built environment and for the group of participants involved (Jones et al., 2008; Kusenbach, 2003; Odzakovic et al., 2018). It has previously been used as a method to engage people living with dementia and explore their perspectives at home (Huizenga et al., 2023) and in

community settings (Bartlett & Brannelly, 2019; Odzakovic et al., 2018), one-by-one or within group walks (Phinney et al., 2016). As these authors reported positive experiences of involving participants in a more equal way and letting them decide where to go and what environmental aspects to see, we decided to choose this method for residents living with dementia in nursing homes.

Ethical Issues

The study was approved by the Ethics Committee of the German Society of Nursing Science (Proposal No. 22-007). Participants, together with their legal guardians (if applicable), gave their written informed consent to take part in the study. In addition, ongoing consent ensured that participants were reminded of the study context throughout the study and prior to the interview so that they had the opportunity to withdraw their consent at any time without giving a reason (Dewing, 2007; Slaughter et al., 2007). There were no fixed times for the interviews, but a situational decision was made with the residents as to whether they felt ready to go for a walk at that time or soon. All names and locations have been pseudonymized to report study results.

Participants and Recruitment

Setting

We purposively selected two nursing homes in one federal state of Germany that had been included in our previous study explained previously (Fahsold, Schmüdderich et al., 2022) and that differed in terms of dementia-specific environmental characteristics assessed by using the G-EAT (total G-EAT score of 52 and 84, respectively). They also varied in location—less than 25,000 versus approximately 600,000 inhabitants, facility size—three and five living units and 65 and 100 residents, respectively. Both facilities were constructed within the last 15 years. By including two different nursing homes that have environments that have been shown to be more or less dementia-sensitive, it would be possible to compare the residents' perspective with two sets of data from a systematic assessment tool at the lower and higher points of the continuum of environmental dementia sensitivity.

Residents

Residents were selected with assistance from a contact person chosen by the nursing homes. At both study sites, social workers were responsible for managing the project. After an initial meeting with the researcher, the contact person selected eligible residents, who were then contacted together. The project was briefly introduced, and interest in participating in a walking interview was elicited and noted. Written informed consent was obtained from the residents and their guardians (if applicable). For inclusion in the study, the presence of dementia was not necessarily linked to a diagnosis according to the ICD-11 (World Health Organization, 2019), and the disease could be diagnosed or determined to be present based on symptoms. By expanding our inclusion criteria in this way, we aimed to include a large proportion of residents in nursing homes living with symptoms of dementia without a diagnosis (Hoffmann et al., 2014). To assess the cognitive status of the residents, regardless of whether they had a diagnosis of dementia as suggested by Palm et al. (2016), the Dementia Screening Scale (DSS) was completed by a staff member who provided direct care to the respective resident (Köhler et al., 2007, 2010; Schäufele et al., 2009). To minimize bias due to

knowledge of the level of cognitive impairment during the resident–researcher interaction, the DSS was conducted after the walking interview. As another inclusion criterion, we recruited residents from all living units in the nursing homes, regardless of a dementia-specific concept, to understand environmental intersectionality with organizational boundaries.

Data Collection

The walking interviews were conducted by one of the authors (A.F.) with a professional background as a nurse and knowledge of dementia-sensitive environmental design due to previous research involvement (see Fahsold, Fleming et al., 2022; Fahsold, Schmüdderich et al., 2022). The researcher familiarized herself with the residents and the environment for several days prior to data collection by visiting and participating in social activities (e.g., gymnastics, singing, and crossword puzzle groups). To address the potential for fluctuations in mood, cognition, and physical ability to walk that can accompany dementia, each data collection day began with a briefing with the contact person about which residents, who had previously given written informed consent, would be comfortable being interviewed that day. If the resident agreed to be interviewed, after a welcome and a reminder of the purpose of the study, the interview began at a location of the resident's choice. It was their decision how far and how much to move during the interview—so they were acting as a tour guide. Some of them chose to be pushed in a wheelchair or to sit in a familiar place for the interview rather than move all the time. For residents who were pushed in a wheelchair, the level of active participation in guiding the interview was limited by giving directions for the walking route.

An interview guide with initiating questions was used to start and maintain the conversation. The questions included were influenced by our previous work on the EAT-HC and our understanding of the boundaries of the built environment (see Supplementary Material 1; see Fahsold, Fleming et al., 2022; Fahsold, Schmüdderich et al., 2022). In addition to general questions about environmental preferences, the interview guide included questions about key design principles for dementia-specific design that were not found to be valid when asked with the G-EAT. Initially, these interview questions were developed with a strong association to the questions in the systematic assessment in order to provide a common theoretical framework of the term “built environment” across all interviews. We reviewed the guide with colleagues experienced in dementia-specific qualitative research and reflected on and adapted some questions in terms of wording after the first interviews were conducted.

The residents themselves determined the focus of the interview on environmental aspects and the places visited. If residents did not feel comfortable leading the interview, the interview was guided more by the interview guide. The researcher then used questions that were appropriate to the environment they were in at that moment (e.g., favorite place outside when entering the garden). In addition, environmental features (e.g., paintings and distinctive furniture) were used as narrative prompts in all walking interviews. Photos of the surroundings visited during the walk-around and floor plans of the nursing homes were collected for visualization and reconstruction of the built environment. Field notes were taken after each walking interview as augmented data to enrich the corpus of written information for data analysis.

The interviews lasted between 13 and 35 min, were audio-recorded via mobile microphones, and transcribed verbatim by a certified transcriber according to [Dresing and Pehl's \(2015\)](#) transcription rules and reviewed by the first author.

Data Analysis

To apply the phenomenological methodology in a structured and comprehensible way and thus increase the trustworthiness of the analysis, a method was sought that supported the epistemological interest and left room for interpretation through applying latent coding, which was necessary due to the communication specifics of dementia. We followed the steps of reflexive thematic analysis according to [Braun and Clarke \(2022\)](#) and applied them throughout the different steps of data analysis (see [Supplementary Material 2](#)). Before we (A.F., K.S.) began to familiarize ourselves with the transcripts, we wrote down our prior knowledge and assumptions (*bracketing*) about the residents' perspective on the built environment following the process described by [Callary et al. \(2015\)](#). We then read the transcripts several times and independently generated initial inductive codes and initial themes using MAXQDA 2022 ([VERBI Software, 2022](#)). We discussed these with each other, checked for similarities and differences, and created a common code structure. With this, the first author conducted further data analysis by sharpening and defining the themes. This was followed by cycles of reflection with the coauthors, through which the differentiation and intersections of each theme were discussed and finalized. Finally, the essence of the analysis was discussed and articulated as an overarching framework. Due to the influence of the interviewees' dementia, there was a need for extensive interview data and a necessity to maximize the amount of material included in the data analysis and interpretation. Field notes were recorded to expand on environment–resident interactions not represented in the transcribed audio data due to communication barriers in the interviews and included in

the coding process. Photographs were used to visualize the environment when residents directly referenced environmental features and resituated them for description and transparency of findings.

Results

We interviewed 14 residents living with dementia within 13 walking interviews. Two residents chose to participate together, and during one interview, a resident who had been interviewed previously was invited to participate by another resident and was interviewed twice. The characteristics of the residents are shown in [Table 1](#). According to the DSS ([Köhler et al., 2007, 2010; Schäufele et al., 2009](#)), eight residents showed symptoms of severe dementia at the time of the interview, and two residents did not reach the threshold for dementia by the DSS but were eligible based on their nonspecific symptoms of dementia they showed. Not all residents felt they were experiencing health problems, with the majority reporting decreased mobility and some cognitive decline. Nine residents were using mobility aids during the interview—if they were using a wheelchair, this limited independent route control to verbal route guidance.

Three themes emerged from the analysis of the walking interviews:

1. Being able to maintain the feeling “to refurbish” or having to let it go.
2. Experiencing the limits and potentials of being independent because of the built environment.
3. Living in a community of residents.

Being Able to Maintain the Feeling “to refurbish” or Having to Let it Go

The residents' previous living situations and the places where they have lived shape their idea of how the living environment

Table 1. Participant Characteristics

| Participant* | Sex | Study site | Interview duration (in min) | Dementia diagnosis | DSS score | Self-reported health issues | Aid used during the walk |
|------------------------|-------|------------|-----------------------------|--------------------|-----------|-------------------------------------|--------------------------|
| Ottilie | Women | 1 | 20 | Yes | 6 | Cognitive decline | None |
| Anni | Women | 1 | 30 | Yes | 4 | Parkinson's disease | Walker |
| Franz | Men | 1 | 25 | No | 0 | Immobility due to stroke | Wheelchair |
| Gisela | Women | 1 | 17 | Yes | 7 | Immobility, pain, cognitive decline | Walker |
| Günther | Men | 1 | 13 | Yes | 7 | / | Wheelchair |
| Katharina | Women | 1 | 35 | Yes | 8 | / | Wheelchair |
| Gertrud | Women | 1 | 17 | No | 3 | Immobility | Walker |
| Helga | Women | 2 | 25 | Yes | 13 | Immobility, cognitive decline | Wheelchair |
| Alfons | Men | 2 | 17 | Yes | 10 | Cognitive decline | None |
| Hildegard ^a | Women | 2 | 35 | Yes | 9 | Urinary incontinence | None |
| Monika | Women | 2 | 35 | Yes | 9 | Cognitive decline | None |
| Waltraud ^b | Women | 2 | 13 | Yes | 10 | Risk of falls due to immobility | Walker |
| Martha ^b | Women | 2 | 13 | Yes | 11 | Hearing loss | Walker |
| Werner | Men | 2 | 30 | Yes | 11 | Cognitive decline | None |

Notes: Names shown are avatar names; DSS score interpretation: (range 0–14), cutoff for dementia symptoms: 2/3, >8 = severe dementia symptoms ([Köhler et al., 2007](#)).

^aHildegard was interviewed alone and joined the interview with Monika.

^bWaltraud and Martha were interviewed together.

in the nursing home should be designed. They refer to the previous living situation in which they grew up as well as the one in which they lived during their adulthood. They talk in detail about living spaces and their furnishings, as well as activities—such as gardening—related to their former home.

Chronic conditions, acute episodes of illness, and a constantly declining general condition mean that residents had to leave their home they had made for themselves and move into a new environment. Limited mobility is a particularly important reason for residents to move out; furthermore, they mention pain and incontinence. None of the residents mentioned cognitive disabilities as a possible reason for moving to the facility.

In general, the event of moving is mentioned frequently in the interviews, regardless of how long the residents have already been living in the nursing home. The experience of moving in is reported differently. Some participants had time to prepare for the move by selecting their own furniture and biographical-related elements to take with them. Then, residents show pieces of furniture that they brought from home during the walk round. They tell associated stories of acquisition and the meaning that the objects have for them. Most of the residents brought only a few items, but they placed them in their rooms in a unique way. However, some residents were not able to bring their own furniture, such as Gisela.

“Well, there was a village. And in the village, there was a hospital. And I was in the hospital when I came here. But what I found outrageous, (coughs). Excuse me, they took everything away from me from the house where I was before, from shoes to everything downstairs, the basement, everything, the whole basement cleared out, my house, where I lived in it, everything taken away. Everything gone.” (Gisela)

Although some residents reported positive first impressions of the built environment of the nursing home, others were not happy with the new living situation because they had different ideas about the environment. Once the interviewees moved into the nursing home, they reported that further actions were carried out to create their living environment. All the measures reported seem to be aimed at shaping the residents’ living space according to their preferences. This applies not only to the phase of arrival but also beyond. For example, the inclusion of biography-related elements in the residents’ environment is closely related to the preference-oriented design of the rooms. Residents themselves pointed out photographs of relatives that are displayed on the walls or on cupboards in their rooms. Gertrud, a resident who was able to bring numerous blankets, pillows, and bric-a-brac, shows her room enthusiastically and refers to the stories of some design elements (see Figure 1).

Depending on how environment-related actions can be carried out before or after moving in, a connection between the familiar and the new environment can develop (see Figure 1). The feeling of being at home increases or the feeling of being a stranger in place becomes stronger as Otilie complains, for example.

“[...] in a sense, you have a room but actually you don’t have room of your own’. I do know, that I live here, you know. But no, I won’t settle down here.” (Otilie)



Figure 1. Arrangement of Gertrud’s familiar interior in her room; on the sideboard, she has placed photos of her mother, her husband, and her children when they were young. (Copyright: Anne Fahsold).

Experiencing the Limits and Potentials of Being Independent Because of the Built Environment

As a result of decreasing health conditions, residents have limited or (almost) no independence in terms of following their environmental preferences (*place of residence, being outdoors, interior design*). As the main problem, they describe immobility and limited walking radius due to incontinence. During the interviews, it became clear that orientation in the new environment—setting “nursing home”—is also a factor that further limits their independence. This is shown by the fact that access to various spaces is only possible to a limited extent and that some residents are no longer able to move independently outside the facility.

I: “You are not allowed to go out here.” I: No? R: “No, no. There is always a hedge and a bush close by, you are not allowed to go out. There’s a gate, but it’s locked.” (Werner)

The residents describe intrinsic and extrinsic resources that enable them to adapt to the new living situation and be (partially) independent. Intrinsic resources can be divided into three aspects. First, residents describe strategies to be mobile and to be able to use and walk around the facility inside and outside as independently as possible. For example, Anni packed various items for our walk in the tray of her walking aid. Later in the interview, she describes that she always has everything she needs with her when she is out and about, so that she does not have to go back to her room on the second floor so often. She sees her walking aid as a central key to accessing her environment despite her Parkinson-related immobility.

Second, residents have developed strategies to address spatial disorientation and wayfinding. This is illustrated by both their descriptions and actions during the walking interviews, for example, as Monika sits in the garden and tries to show where her room is located.

I: “Can you actually see your room from down here?” R: “Um, my room? Yes. That should be, give me a hand please, that should be the second floor, there [pointing with her finger] Yes, I live up there. Oh, I can recognize half of my curtain.” (Monika)

Third, most of the residents describe that they made peace with the restrictions of not being able to use the building environment independently.

Residents also rely on extrinsic resources to make use of the built environment. These are primary resources within the social environment in the form of staff and fellow residents, as well as relatives when they come to visit (mechanisms to use the built environment).

There seems to be one exception: dementia-specific design elements are mostly not addressed by the residents themselves. Only signs, especially name signs on the room door and name tags on the table in the dining room, are addressed by themselves (see [Figures 2 and 3](#)).

Living in a Community of Residents

The idea of how life should be in a nursing home, and thus living together with other (nonfamily related) people, is shaped by various environment-related preferences. For example, Katharina reports how important it is to her that it is clean and tidy around. This need for tidiness and aesthetics can also be deduced from Hildegard's actions during the interview when she picks up an errant stick in the flower bed that seems to bother her. Other residents describe how important it is to live in a quiet environment or talk about their preferred interior regarding color, room temperature, or lighting. In addition to these observations, several activities are mentioned that the residents like to do and that are related to specific environmental demands. They describe how they carry them out in the context of the built environment inside and outside. Those activities vary widely but can be categorized as those they pursue alone, alone or with other residents or exclusively organized by the facility's community. Some places are directly associated with a specific activity for them. For example, during the walking interviews, Werner points out a spot in the living room that he and his fellow residents regularly take to gather together.

R: "And here on the left is where we sit when we have something to discuss. [...] That's what we do sometimes. [...]" (Werner)



Figure 2. Anni's place in the dining room: During the walk, she shows the card on the table in front of her chair. It has a rose on it, indicating the living unit in which she lives. Her name is also written on the bottom to mark her place at the table. (Copyright: Anne Fahsold).



Figure 3. View of Werner's room door: The blessing of the carol singers hangs on his door, along with a sign that was hung there by the social workers with his name on it and a photo of him standing next to his bicycle. (Copyright: Anne Fahsold).

This connection between activity and space was also reflected in the description of the residents' fixed places in the dining or living room. Some of the residents deliberately show their seats; for others, the conversation arises by asking while walking through the rooms. Although Gisela and Anni show their seats and describe with whom they share a table, Alfons does not verbalize this but purposefully goes to his seat and sits down to eat.

Fixed places or environmental elements that are explicitly assigned to and used by the residents, as well as those that the residents themselves have designated as their area, appear several times during the walking interviews. However, some of the residents' descriptions also show that they experience boundaries of their own living environment. For example, Hildegard is not sure whether she is allowed to use the path in the garden during a walk. Monika, on the other hand, clearly demarcates her area when we talk about her activity to watering the plants at the different balconies.

The built environment is also a link to fellow residents in the living unit and the entire facility. This becomes clear during the walking interviews when fellow residents spontaneously join the walk or start a conversation with the residents when they meet. For instance, Monika invited Hildegard to the walk when they met in the hallway. Martha and Alfons seem to build on their preexisting social relationship during the interview (see [Figure 4](#)).

Martha sees Alfons coming around the corner and waves toward in his direction.



Figure 4. The entrance area to all living units in this nursing home where sitting residents and people walking in front interact with each other, except during lunchtime. (Copyright: Anne Fahsold).

R1: “Yes. Oh, because there’s a good friend of mine (to the interviewer). Hello! Well? R2: “Hello!” R1: “How nice to see you again!” R2: “My God” R1: “It has been a long time since we have seen each other.” (Martha and Alfons)

Balconies and windows as environmental elements link the residents with the neighborhood and life outside the institution. Franz and Gertrud show their view into the distance, describing how they see both nature and their neighbors’ gardens.

Residents value the built environment based on how well it adapts to their preferences or accommodates activities that can be done alone or in community at the same time. For some residents, it is a specific event that led to the evaluation of a place or environmental element, while others describe it more broadly.

R: “Yes, and there’s the garden here. If you look down, it’s not really a garden, it’s more like a courtyard, you could rather say, yeeh, but that’s where people meet from time to time. Right? Sometimes, sometimes there’s, there’s music played or something. And, and it’s a very, very comfortable place. Everybody can reach it in five minutes and, er, and there’s space enough and the, the round tables, they were bought later, I think, and that, er, is quite cozy.” (Monika)

Essence of the Analysis

These themes are subordinate to the “essence” of residents’ lived experience of their built environment in long-term care. The essence is as follows: the built environment can serve as a facilitator or barrier to residents’ self-determination in the institution “nursing home.”

Discussion and Implications

The analysis contributes to enhancing the understanding of how residents living with dementia experience the built environment in nursing homes. The results show that residents experience their built environment in different ways: Already at the beginning of their residence in a nursing home, it becomes relevant for them to find ways to connect with what leads to either a feeling of being at home or of being a

stranger in this place. At the same time, the experience of their built environment is the basis for their sense of independence in daily living, which they experience in a variety of forms and with limitations. Finally, the built environment forms the framework for living together in a group of people outside their familiar environment. The essence of our analysis is that the built environment contributes to maintaining the self-determination of residents living with dementia in the institution “nursing home.” This is essential, as a certain degree of independence is already taken away by predetermined daily routines and the preselection of activities that may not be consistent with residents’ preferences (Mjørud et al., 2017) but are offered and influenced by the care concept or the interests of the majority of residents. Self-determination can be promoted through codetermination in the design (Fleming et al., 2022) and use of the built environment, despite the downsizing of the living environment (Førsund et al., 2018).

There are some aspects that emerged during this analysis that should be critically reflected upon in terms of their implications for understanding the lived experience of residents living with dementia and for research activities in this field.

Moving to a Nursing Home is a Critical Event for Further Environmental Experiences

Residents described their movement into the nursing home and associated feelings in detail during the walking interviews. The importance of this experience is also emphasized in other studies. Sun et al. (2021) explain the transition from living at home to a nursing home within a phase model. They identify the decision-making process as a critical element in the experience of the subsequent phases. Just as some participants in our study reported not having been involved in this process, other studies also found the same (Lee et al., 2013). There may also be presuppositions related to the setting as a protected and structured environment with a community lifestyle that influences the idea of the new care environment (Aminzadeh et al., 2009). Similarly, the positive experiences of residents in our studies show how the experience of moving in helped them settle in quickly. The aspect of homeliness was also mentioned by author authors (van Hoof et al., 2016). From a qualitative research perspective, the individual actions taken by staff and relatives in relation to this homeliness seem to be of value to the residents who were asked about these aspects (Eijkelenboom et al., 2017; Johansson et al., 2022; Rijnaard et al., 2016).

Benefits and Barriers of Sharing Living Spaces with Other Residents

Residents expressed positive and negative feelings about sharing space in the nursing home. Some of them spent a lot of time in their rooms because the shared environment was too noisy or their favorite places were occupied by fellow residents. Nygaard et al. (2020) found that residents can experience their fellow residents as both a resource and a burden. We could not show a relationship between this aspect and the fact that residents created places in the shared environment for their own purposes, alone or together with the other residents. However, most residents lived in a family home with their relatives—people they actively chose to live with. In the setting of a nursing home, residents are confronted with a group of people with whom they must share space, people they have not chosen as their peer group. Although sometimes new friendships have been formed as a result of living together

(Casey et al., 2016), the need to be alone can be intensified by the symptoms of dementia, which enhances sensitivity to, for example, noise outside one's own room (Janus et al., 2021). Against this background, it could be discussed whether social withdrawal to the person's own room always needs to be labeled an undesirable outcome and/or how shared living spaces can be created to promote privacy for residents who prefer to be alone (Fleming and Bennett, 2017).

Distinction Between the Assumptions in Environmental Assessments and the Lived Experience of Residents Living With Dementia

In the context of our previous research activities, this study was also conducted to enhance our understanding of environmental aspects that we cannot yet assess with a systematic assessment but that are relevant to residents. One aspect that should be highlighted is the different definitions of the living space in the context of an assessment and by the residents. In our study, they walked around the entire facility, crossing boundaries that would have been defined as the "end of the living unit" within a systematic assessment. Similarly, Topo and colleagues showed that residents may experience environmental boundaries that cannot be captured within an existing assessment tool because they are experienced differently by each individual and depend on their ability to adapt to the specifics of the care environment (Topo et al., 2012). This raises the question of whether the definition of the living unit should be diluted in studies that capture the perspective of residents, as suggested, for example, by Estabrooks et al. (2011) in their descriptions.

Another aspect to mention here is that residents did not refer to the use of dementia-specific aspects as much as we had previously assumed. Their statements were more related to their social environment, for example, when they mentioned other people as particularly salient for finding a room. Nevertheless, it should not be abstracted from the fact that dementia-sensitive environmental elements may be dispensable (Calkins, 2018; Fleming & Purandare, 2010).

Strengths and Limitations

As this study was exploratory in nature, the following aspects need to be noted. Nursing homes were explored through the lens of the residents, and their stories were key to defining the places as well as their emotional connection to the place/their experience of the space. We also decided not to recruit residents in another nursing home in order to achieve thematic saturation. Due to the outbreak of coronavirus disease-2019 in one living unit and the reduced general condition of some residents due to heat waves during the study period, some potential participants dropped out of the study. We reflected on this and decided to stick to our exploratory approach with a limited number of cases given the long and intensive preparation phase of data collection by building relationships with staff and residents of the nursing homes.

A strength of our study was the inclusion of all data collected during the study in the analysis. The inclusion of verbal and nonverbal material such as field notes and photographs helped tremendously in presenting the residents' perspectives. It was helpful to be able to link their stories to their actions during the interview process.

Due to the privacy of the residents and the possibility of disturbing other residents not included in the study, we did not attempt to establish this association more directly

through videotaping, as done by Odzakovic et al. (2018) in their study on the experience of the neighborhood with dementia. Another critical aspect is that we collected some structural data provided by the residents, so only they controlled what they told us. Thus, the characteristics of the participants, such as age and time of admission, were not systematically collected by interviewing staff or relatives. The information could differ from the actual information provided, depending on the current reality of their lives; therefore, objectively ascertainable characteristics were not used for the analysis.

Conclusion

This study contributes to the understanding of how residents with dementia experience and perceive the built environment of the nursing home in which they live. The analysis identified environmental aspects that are highly relevant to residents and cannot be assessed using a systematic assessment tool. This may have some implications for considering the built environment as a contextual factor in dementia-specific intervention studies in nursing homes to achieve sustainability of care. First, considering the lived experience of residents living with dementia alongside the use of a systematic environmental assessment may enhance capturing the reality of the care context. Second, accepting inferences between the built environment and the social and organizational environment may help to address the mechanisms of care provision. Ways to address this need to capture the built environment from a more person-centered perspective in research need to be explored in future research—including analysis of the results of this study with data on care provision and organization in the participating nursing homes—and discussed in the context of different research paradigms and epistemological interests across health research disciplines.

Supplementary Material

Supplementary data are available at *Innovation in Aging* online.

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Conflict of Interest

None.

Data Availability

This study was not preregistered. Data and materials are not available due to inability to blind the data to protect participant anonymity.

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