





# Promoting activity and mobility in long-term care environments: A photo-elicitation study with older adults and nurses

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## Abstract

**Aim(s):** The aim of this research study is to collaboratively generate insights in the current institutional long-term care environment for activity and mobility of older adults, and of solutions that could be used to increase the activity and improve the mobility of the older adults.

**Design:** This research constitutes a qualitative study with a critical approach.

**Methods:** Data were collected using photo-elicitation in four long-term care units in Finland during the spring of 2022. Older adults participated in individual data collection sessions which combined photographing and discussion. Staff members individually took photographs and later participated in a group discussion based on the photographs. Reflexive thematic analysis was used to analyse all data together.

**Results:** Ten older adults and 12 staff members participated in the research study. Four themes were identified: (1) facilities should be designed and equipped for their users, (2) moving in the institutional environment, (3) passivity as a norm, and (4) nurses should act differently and have the resources to do so.

**Conclusion:** To increase the activity and improve the mobility of older adults, improvements are needed in terms of the design of facilities, opportunities for freedom of movement, outdoor activity, daily life activities, exercise, nurses' role in activating older adults and resources.

**Implications for the profession and/or patient care:** Increased attention to the support of activity and mobility could benefit older adults in institutional long-term care. Physical activity promotion should be incorporated as an integral part of nursing practice.

**Patient or public contribution:** Directors of units were consulted when planning the study. Older adults and nurses contributed to the data collection and interpretation of data.

**Impact: (Addressing):**

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- What problem did the study address?
  - Older adults have recurrently been reported as living inactive lives in institutional long-term care.
  - There is evidence of the relationship between the environment and the activity and mobility of older adults, but there seems to be a research-practice gap in terms of implementing activity- and mobility-promoting environments.
  - Older adults and staff members are important in developing practice and change-oriented knowledge that can be used to increase the activity and improve the mobility of older adults in institutional long-term care.
- What were the main findings?
  - Various environmental improvements are recommended to increase the activity and improve the mobility of older adults in institutional long-term care settings.
  - Improvements for the design of facilities, opportunities for freedom of movement, outdoor activity, daily life activities, exercise, nurses' role in activating older adults and resources for activity support would benefit older adults' activity and mobility.
- Where and on whom will the research have an impact?
  - Increasing the activity of older adults requires better activity promotion and mobility support by nurses in institutional care. Sufficient education and resources should be organized for activity promotion, in addition to a care and organizational culture that values activity.
  - Environmental aspects to promote activity and mobility need to be considered already at the planning, building and renovating phases of facilities.
  - Policymakers and care organizers should consider evidence of the harms and benefits of different institutional living environments when making decisions on organizing care.

**Reporting Method:** The study is reported using the Consolidated Criteria for Reporting Qualitative Research (COREQ).

#### KEYWORDS

activities of daily living, care needs, dementia, fundamental care, gerontology, interviews, long-term care, mobility, nursing homes, older adults, physical activity, ward design

## 1 | INTRODUCTION

Supporting the basic needs for the activity and mobility of older adults living in institutional long-term care is vital. In these settings, older adults are often multimorbid (Sverdrup et al., 2018), and require assistance in activities of daily living and mobilizing, due to impairments in either cognitive or physical function, or both (Palese et al., 2016). In recent decades, older adults in institutional care settings have manifested increasingly poorer health and disability (Palese et al., 2016). Prevention of functional decline and loss of autonomy are major challenges in these settings, and should be counteracted with physical activity (Peyrusqué et al., 2023). Unfortunately, recurrent evidence indicates that older adults in long-term care settings live inactive lives (den Ouden et al., 2015; Parry et al., 2019). To increase the activity of older adults in institutional long-term care, environmental aspects at all dimensions of the environment should be employed (Narsakka, Suhonen, Kielo-Viljamaa, & Stolt, 2022).

### What does this paper contribute to the wider global community?

- The study contributes to the body of knowledge about the relationship between the institutional long-term care environment and the activity and mobility of older adults.
- The findings can be used to assess and improve long-term care environments for the activity and mobility of older adults in various settings and by several stakeholders.
- The findings contribute to the knowledge of the importance of nursing for the activity and mobility of older adults in institutional long-term care and can be used by nurses and institutions to improve the quality of care.

## 2 | BACKGROUND

Promoting physical activity and mobility in long-term care is important for older adults' health and wellbeing. Physical activity is defined as movement produced by skeletal muscles resulting in energy expenditure (Caspersen et al., 1985). Staying active at an older age reduces the risk of mortality and chronic disease, and prevents decline in physical and cognitive functioning (Cunningham et al., 2020). For older adults living in institutional long-term care settings, it is recommended to engage in regular physical activity training to improve muscle strength and cardiorespiratory endurance by walking and performing resistance, flexibility and balance training. Training should be adjusted to individual preferences and abilities, such as mobility limitations, and can be performed sitting, for example, as functional exercises, yoga and chair training. (Peyrusqué et al., 2023) For this population, even increases in low- and light-intensity activity, such as performing the activities of daily living, may improve physical functioning, mobility and quality of life (Baldelli et al., 2021).

Physical activity and mobility are related. Mobility is defined as the ability of a person to go where, when and how they want to go (Moulton et al., 2019). Decreased physical activity decreases mobility, which in turn is a risk factor for increased inactivity (den Ouden et al., 2015). Furthermore, decreased mobility increases care dependency (den Ouden et al., 2015) and the risk of falling (Ho et al., 2021), and leads to feelings of poorer self-worth by older adults (Pentecost et al., 2020).

To promote the activity and mobility of older adults in institutional long-term care, considering the quality of the environment is crucial. Decreasing functioning decreases adaptability to the environment. According to the environmental press theory by Lawton (1989), too demanding as well as too undemanding environmental aspects (environmental press) for an older adult's competence level lead to maladaptive behaviour. The environment is defined as including the qualitative dimensions of the physical (matter-based aspects), social (individuals and groups) and symbolic (ideational, normative and institutional elements) environment (Kim, 2010). Various aspects of all of these dimensions have been identified as relating to older adults' activity (Anderiesen et al., 2014; Benjamin et al., 2014; Douma et al., 2017; Narsakka, Suhonen, Kielo-Viljamaa, & Stolt, 2022) and mobility (Narsakka, Suhonen, & Stolt, 2022; Rommerskirch-Manietta et al., 2021) in the institutional long-term care setting. However, considering the recurrent evidence of older adults in long-term care settings living inactive lives (den Ouden et al., 2015; Parry et al., 2019), a research-practice gap seems to exist regarding the implementation of this evidence as activity- and mobility-promoting environments. This study shows how research could contribute to the start of the implementation of activity- and mobility-promoting environments, together with those involved.

In Finland, it has been observed that activity and mobility are two of the most often neglected care needs of older adults in institutional long-term care (Kangasniemi et al., 2022). Furthermore, older adults do not have as many services, as much time with care staff, or as many opportunities for going outdoors as they would like to have (Kehusmaa et al., 2021). Their personal resources are not utilized in the support of their functioning (Edgren et al., 2021). To find solutions

to increase the activity and improve the mobility of older adults in institutional long-term care, assessment of environmental aspects and taking actions to change these could be done in terms of multiple dimensions of the environment (Benjamin et al., 2014; Narsakka, Suhonen, Kielo-Viljamaa, & Stolt, 2022). Persons living and working in the long-term care setting have valuable experiences that could be exploited to develop care and environments that best meet the older adults' needs (Lood et al., 2022; Phillipson & Hammond, 2018). Furthermore, due to the heterogeneity of long-term care environments and their users, contextual knowledge is important in solution generation. Not many scholars have yet conducted studies, focusing on insights and solutions in specific contexts with the stakeholders.

## 3 | THE STUDY

Our aim was to collaboratively generate insights in the current institutional long-term care environment in terms of promoting the activity and mobility of older adults, and of solutions that could be used to increase the activity and improve the mobility of the older adults. To do this, we investigated the perspectives and experiences of Finnish older adults and nursing staff members living and working in these settings. We investigated the following research questions:

1. How does the institutional long-term care environment relate to older adults' physical activity and mobility in institutional long-term care?
2. How should the environment be improved to increase the activity and improve the mobility of older adults?

## 4 | METHODOLOGY

### 4.1 | Design and theoretical underpinnings

We conducted a qualitative study with a critical approach. Our work was founded on the metaparadigm of nursing, affirming the person and their health, the environment, and nursing important for care (Henderson, 1991). We further based our work on Lawton and Nahemow's ecological model of the environment and ageing (Lawton, 1989). Our theoretical stance was grounded on critical theory, positioning research and theory as tools to change situations (Patton, 2015; Wang & Burris, 1994). We drew on ideas of critical gerontology; the emancipation of older people; involving older people in all aspects of research, policy; and practice; and promoting values of social change (Cole, 1993).

### 4.2 | Study context

We conducted the study in the context of Finnish institutional full-time, long-term care. Finland has universal social and health care, and services are funded by taxes. Care at home is the primary mode of long-term care for older adults, and institutional care is provided only

for medical and safety-related reasons (Act on Supporting the Functional Capacity of the Older Population and on Social and Health Services for Older Persons 28.12.2012/980, 2012). The public sector is responsible for organizing services but may contract private sector actors to provide services (around 50% in 2021). Of adults aged 65 and over and 75 and over, 3.6% and 7.1%, respectively, lived in institutional long-term care settings at the end of 2021. Their average age was 84 years. On a scale of 1 (fully independent) to 5 (continuous need for long-term care), their need for care was, on average, 4.8. (Mielikäinen & Kuronen, 2022) Most older adults in institutional long-term care need care due to functional impairments caused by dementia. In 2016, more than 70% of older adults in institutional long-term care had at least moderate dementia (Voutilainen & Löppönen, 2016).

Institutional long-term care units are most often large buildings with several smaller units. Older adults pay rent for their own rooms, calculated as a percentage of their monthly income. They may furnish their room with some of their own belongings; beds are usually the property of the facilities. Units have a common area for older adults for dining, spending time and doing activities together. Some common areas within the facilities may be shared by residents of all units, such as banquet halls and gyms. Staff working in long-term care units comprise mostly licensed practical nurses (approximately 80%) (Kehusmaa & Alastalo, 2021) having a vocational degree (180 ECTS), and registered nurses (< 10%) (Kehusmaa & Alastalo, 2021) having a bachelor's degree (210 ECTS) in social and health care. Currently, there is a transition period to amend the Act, increasing the nurse-resident ratio in institutional long-term care units from 5:10 to 7:10 (Kehusmaa & Alastalo, 2021). At the time of data collection, the ratio was 6:10.

### 4.3 | Recruitment and participants

We conducted the study in one of the bigger cities of Finland. We used purposive sampling (Patton, 2015) and recruited four long-term care units to participate. Directors and managers in charge of the city's public long-term care units selected the participating units based on the units having eligible and interested participants. The sample included 12 staff members and 12 older adults, three staff members and three older adults from each unit. The sample was chosen to include different units with possible differences in environments, with several participants and the perspectives of both staff and older adults from each unit. Older adults were eligible to participate if they were at least 65 years old, had been living in the unit for at least 6 months, and were assessed by staff members to be able to provide informed consent. Staff members were eligible if they were working in the unit for at least 50% of their full-time work hours, participated daily in the care of residents and had been working in the unit for at least 6 months.

### 4.4 | Data collection

We used photo-elicitation to collect data (Collier, 1957). In this method, photographs are used together with verbal interaction. The

photographs are taken either by the participant or the researcher, and used together with individual or group discussions (Collier, 1957; Phillipson & Hammond, 2018). The method was first introduced by John Collier (1957), after he successfully used photographs to elicit evaluating housing. Similar visual approaches have later been found to be useful to engage participants to reflect on their physical and social environments (Novek et al., 2012), resulting in practical and change-oriented knowledge (Wang & Burris, 1994). With people with dementia, these kinds of approaches have been used, for example, for problem definition and evaluation (Phillipson & Hammond, 2018).

The data were collected in the Finnish language. It should be noted that in vernacular Finnish, 'activity' and 'mobility' are referred to with the same word (*liikkuminen*) that can also be used to mean 'exercising'. The data were collected by the first author during the spring of 2022.

#### 4.4.1 | Data collection with older adults

The first author had individual data collection sessions with the older adults. Individual sessions were selected to include older adults with varying cognitive and physical functioning. We asked the older adults to think and talk about their activity and mobility in the institutional long-term care setting, and the external enablers and impediments they experienced in terms of their activity and mobility. We took photographs based on their instructions and identification of environmental aspects. If the older adult was not orientating to taking photographs, we took photographs based on the discussion. We probed the older adults about topics identified from the literature (Benjamin et al., 2014; Narsakka, Suhonen, Kielo-Viljamaa, & Stolt, 2022), including aspects of the physical (facilities, common areas, outdoor areas, resident room), social (people, activities, situations) and symbolic (ways of acting, rules, norms) environment. We asked about things that could be changed so that their mobility and activity could be improved. We encouraged the older adults to move in the facilities to evoke talking about the environment, and some of them did. The data collection sessions lasted between 21 and 65 minutes, excluding informing and instructing the participants and collecting informed consent and background information, and were recorded. A few participants expressed during the session that they no longer wanted to continue, and we ended the session. All discussions were used as data. Field notes about facility characteristics were taken by the first author during the data collection to inform the analysis of the data.

#### 4.4.2 | Data collection with staff members

With the nurses, we used the following approach: (1) the nurses individually took photographs, and (2) they discussed the photographs in a group. (1) For the photographing, we provided digital cameras, memory cards and data collection sheets to the units. The

first author personally gave instructions to the nurses on how to use the camera and fill in the data collection sheet. As visual methods can produce large amounts of data, common practice is to limit the number of photographs taken by participants, and ask them to select the most important photographs (Novak et al., 2012). We instructed the nurses to: (a) take (a maximum of) 10 photographs of environmental aspects related to the older adults' activity and mobility, for example, related to facilities, design, objects, situations, people, activities, ways of acting, rules or anything external to the older adults, and that acted as impediments or enablers, (b) title each photograph and (c) select the three most important photographs. Each unit had a camera for a period of 1 week. (2) Subsequently to the photographing, the first author organized a group discussion with the nurses. We invited all the nurses to participate. In the group discussion, the first author showed the nurses some of the photographs they had taken, and facilitated a discussion based on these. The nurses were instructed to discuss: (a) environmental enablers and barriers for older adults' activity and mobility, (b) environmental aspects to improve and how to do so, and (c) existing enablers that could be used more to activate older adults. We encouraged the nurses also to discuss things based on the photographs other than the most obvious depicted topics. The group discussion lasted 2 h and was recorded. Participation counted as work time for the nurses.

#### *Data organization for the group discussion*

The first author organized the photographs for the group discussion. Photographs to be shown in the group discussion were selected so that: (1) the photographs nurses had found most important would be included, and (2) as many different topics as possible could be discussed. We prepared a slide show of the nurses' photographs to facilitate the discussion. Each slide included more than one photograph on a similar topic. The titles of the photographs were not presented to the nurses in the group discussion.

#### 4.4.3 | Background information of older adults and facility characteristics

The older adults were asked about their age and gender. In addition, their mobility was assessed as: (1) walks independently without aids, (2) walks independently with aids, (3) walks with the help of a nurse or (4) ambulates by wheelchair. The nurses filled in a background information form, including their age, gender and profession, work experience in the unit and work experience in older adults' long-term care. The managers of the participating facilities were asked about the year the facilities were built and when they were last renovated.

### 4.5 | Data analysis

For the analysis, we used the six-phased reflexive thematic analysis (Braun & Clarke, 2006, 2021) to identify patterns of meaning in the

dataset. It is a theoretically and process-wise flexible approach, which allowed us to use the different forms of data together in an inductively developed analysis, and approaching the two research questions in a merged manner. As the data for the two research questions are interrelated, their separate analysis would have been superficial. We used mostly semantic coding, but also examined latent constructs.

#### 4.5.1 | Data analysis of the individual and group discussions

The first author transcribed the individual and group discussions verbatim, and then checked the transcriptions. Subsequently, using a spreadsheet, she coded all the meanings in the data that related to the relationship between the environment and the physical activity and mobility of the older adults. After coding, all codes were copied to a web-based Flinga whiteboard to start organizing them according to similarities in ideas and meanings. The whiteboard allowed for displaying all the codes at once, moving the codes around, organizing them into themes, adding theme names and other comments, and drawing connecting lines between the codes and themes. Some of the themes were developed earlier on, and others needed more revision during the process. After beginning to feel that the themes were telling a story about the data in relation to the research questions, the first author started writing. At this stage, she discussed the themes' coherence, content and interpretation, and the overall story of the analysis with two other authors and further developed the themes through this process, also revisiting the original data. Appendix S1 includes an illustrative example of the conducted analysis.

#### 4.5.2 | Data analysis of the photograph titles and photographs

The titles of the photographs taken by the nurses were included as data in the analysis. As all nurses' photographs were not discussed in the group discussion, this was done to include all photographs and the titled descriptions given by nurses in the analysis. The title data were analysed together with the discussion data as described above.

The photographs were organized during the theme development into the same themes as their title and corresponding discussion data using a spreadsheet. The photographs were interpreted with discussion and title data to reflect the meanings participants had given them, and therefore, were not separately coded. The photographs were used to facilitate and deepen the interpretation of the discussion and title data by checking the pictures in relation to what was said. The presented photographs are complemented by the original titles given by the nurses, or in the case of the residents' photographs, titled according to the topics of the photographs. To anonymize the photographs, some photographs have been modified by cropping and blurring.

## 4.6 | Ethical considerations

The study was conducted in accordance with the guidelines of the Finnish National Board on Research Integrity TENK. For this study, we obtained ethical approval from the University Ethics Committee (5/2022/14.2.2022), and a research permit from the participating organization (H22/16.3.2022). The directors of the units were consulted at the planning phase of the study. The unit managers acted as liaisons between the authors and the participants, disseminating subgroup-specific information letters for the staff members and the older adults, and organizing the data collection sessions. We also informed the family members of the older adults. To express interest in participating, staff members individually contacted us by email, while the older adults informed staff members. Before giving informed consent in writing, participants were informed orally and in writing of the purpose of the study, their voluntary participation and right to withdraw without consequences, the handling of their personal data, possible harms and benefits, and the research process, and had the opportunity to ask questions. Participants were informed about the research team's interests and experiences with the research topic and field. We anonymized all individual and group discussion data during the transcription process. Photographs were taken only of persons who had given permission to be photographed, and were anonymized. Only photographs that nurses have given permission to be published are used in the report.

## 4.7 | Rigour and reflexivity

The research team consisted of women living and working in high-income European countries. We all work in research, and have an interest in research with older adults and the long-term care setting. The first author is an early-career researcher, and the other three authors are experienced researchers in the field. Three of us have practice-based bachelor's degrees in social and health care and a background in clinical work with older adults in the long-term care setting.

To ensure the rigour and trustworthiness of the study, we have reported our theoretical underpinnings, experiences and skills, as reflexive thematic analysis is a subjective practice to conduct qualitative analysis (Braun & Clarke, 2021). Furthermore, in the analysis process, we used handwritten notes to reflect the development of the analysis and our own positions on the topic, and an electronic audit trail for the theme development process. Moreover, we have reported detailed descriptions of the study context, participants, data collection and analysis methods. The study benefited from the triangulation of several data sources and two participant groups. Moreover, in conducting and reporting the study, we have used the quality guidance for reflexive thematic analysis by Braun and Clarke (2021), and the Consolidated Criteria for Reporting Qualitative Research (COREQ) (Tong et al., 2007).

## 5 | FINDINGS

### 5.1 | Characteristics of participants and facilities

Of the 12 older adults and 12 staff members recruited, altogether 10 older adults and 12 staff members gave informed consent to participate in the study. Additional two older adults expressed interest in participation but declined before giving informed consent. All staff members were nurses. Of the twelve nurses, eleven participated in photographing, and four in the group discussion. Participant and facility characteristics are presented in Table 1.

### 5.2 | Findings of reflexive thematic analysis

Altogether, 786 codes were formed during the analysis (older adults ( $n=372$ ), nurses' group discussion ( $n=324$ ) and titles of photographs ( $n=90$ )). We formulated four themes and three sub-themes during the analysis. An overview of the themes and sub-themes is presented in Figure 1.

#### 5.2.1 | Facilities should be designed and equipped for their users

The older adults and staff members identified various design aspects, impediments, and enablers of the facilities and aids for the older adults' activity and mobility. We developed a theme to present these, named *Facilities should be designed and equipped for their users*, including two sub-themes: *Design and aids for mobility* and *Physical environment in support of outdoor activity*.

##### *Design and aids for mobility*

Several attributes relating to the design of the facilities were discussed by the older adults and nurses in relation to the older adults' mobility. Sufficiently spacious resident rooms, toilets, hallways and entrances were considered to be important for mobility. Newer units had larger resident rooms than older buildings, something that was liked by the nurses and older adults. Rooms as in Picture 1 were described to be small and inconvenient to use.

This (room) is small, but it'll do. If it were bigger, it would be easier to turn around with this (wheelchair).

Older adult 2.

The lack of space was also related to the layout, equipping, and furnishing of these spaces.

And the toilet is a good size too, if only it had been designed differently in the first place.

Nurse 1.

TABLE 1 Characteristics of participants, units and numbers of taken photographs.

	Built	Last renovated	Older adults	Photographs/older adults	Nurses, photographing	Nurses, group discussion	Photographs by nurses	Photographs, group discussion
Unit 1 (n) <sup>a</sup>	1970s	>10 years	3	25	3	-	26	18
Unit 2 (n) <sup>a</sup>	1960s	>10 years	3	27	3	-	30	18
Unit 3 (n) <sup>b</sup>	<5 years	n/a	1	11	2	-	16	8
Unit 4 (n) <sup>b</sup>	<5 years	n/a	3	26	3	-	18	11
Total (n)			10	89	11	4	90	55
Women, %			70		82	-		
Age, range			67-92		21-58	31-58		
Age, mean			82		40	44		
Walks independently with/-out aid, %			40					
Walks with aid supported by nurse %			30					
Ambulates with wheelchair only, %			30					
Practical nurse					8	3		
Registered nurse					3	1		
Work experience in unit, range					2-19	3-19		
Work experience in unit, mean					5	8		
Work experience in older adults' LTC, range					2-21	6-21		
Work experience in older adults' LTC, mean					12	16		

<sup>a</sup>Closed unit, facility without enclosed outdoor area.

<sup>b</sup>Closed unit, facility with enclosed outdoor area.

Abbreviations: n/a, not applicable; -, not told to avoid identification of participants.



FIGURE 1 Themes and sub-themes developed during the analysis. The darker colours (inner circle) represent themes and the lighter colours (outer circle) corresponding sub-themes, when applicable. The older adult is depicted in the middle, according to the meaning of the word 'environment' (environ [French] = to surround).



PICTURE 1 Cramped space (photograph by nurse).

... at the point when the tenancy agreement is made, it should already be pointed out that how full the room can be so that both the resident and the carers can work there safely ...

Nurse 2.

Poor design prevented older adults from using some balconies and terraces, as they could not be accessed with a bed or because of extremely high doorsteps (Picture 2).

Doorsteps in general were perceived to impede older adults' mobility. Entrances with no doorstep were found to be the best option.

From here [the front of the wheelchair] it goes on quite easily. But here you need someone to drive a little bit, when you go over the big wheel.

Older adult 9.

Stairs were criticized as being dangerous for older adults, and especially so when having an open design. Guardrails were used to prevent older adults accidentally going on them. Handrails and seating in the hallways, and brightness and automatic lights were perceived to be important for mobility.

And it is good to enter [the toilet]. I step in there and the light comes on immediately. So you don't have to touch anything.

Older adult 7.

Staff members praised the red colour used in toilets and bathrooms to help older adults perceive the space and objects in it, as seen in Picture 3. They wished these kinds of signal colours would be used also in outdoor spaces.



PICTURE 2 A nice balcony that no one uses (photograph by nurse).



PICTURE 3 Accessible toilets facilitate toilet visits and support independence. Similarly, a ceiling hoist increases the possibilities for mobility when using the toilet, even if your legs cannot carry you. (photograph by nurse).

On the contrary, colour differences in floors (Picture 4) were perceived as harmful for older adults with dementia.

For some, the movement stops there [the color difference on the floor], so they are clearly frightened by it.

Nurse 2.

Aids for mobility and transfers were discussed by both sub-groups. Patient lifts to aid in mobilizing the older adults were pictured and



PICTURE 4 No need to stumble (photograph by nurse).

discussed by the nurses. A new integrated ceiling lift system was found to be especially practical, extending also to toilets and saunas (Picture 2). Both sub-groups perceived there being enough appropriate mobility aids.

It [the walker] belongs to the facilities. Actually, the facilities own all of those. They are being used if necessary, whoever needs it. I sometimes have even two walkers.

Older adult 7.

Nurses wished the users of the facilities and other experts would be included more in the design processes of facilities.

#### *Physical environment in support of outdoor activity*

Outdoor spaces were considered important for older adults' activity. Those facilities that were more newly built had enclosed outdoor spaces. Nurses thought that these could facilitate the independent activity of the older adults.

We also have a few like that, that they maybe, especially in the summertime, would enjoy being out there outdoors, even many hours. Listening to birds singing, enjoying the sun, they could manage in a way, but it would require an enclosed area or so. They have memory-impairments, so they can't leave. They would get lost even in the surrounding area.

Nurse 2.

In general, yards with asphalt and paving were considered to enable outdoor mobility (Picture 5). Nature, things to see and do, places



PICTURE 5 A large courtyard with various activity stations supports the maintenance of fitness (photograph by nurse).

to sit, and areas with shelter and shade but also sunny areas were considered to be necessary for the use of these spaces. Older adults mentioned nature, the beauty and calmness of the outdoor spaces, and good walking lanes as relevant for going outdoors.

But I've liked it here because [the area] it's beautiful. When everything is blooming, it's very beautiful and then it's quite quiet. There's nothing huge that people would be running around and going and rioting, but it's just kind of peaceful.

Older adult 6.

Some of the yards had level differences or stairs, which were considered to be unsafe for older adults by the nurses and impediments for mobility by the older adults.

I was going to say that this is nice [entrance to the yard], so you can go straight to the yard. But is that maybe a bit downhill? Would you dare to let anyone go alone?

Nurse 1.

One of the units was on a hill, which was considered unsafe by staff members. The maintenance of outdoor spaces was considered to be insufficient, as snow, ice, and unnecessary gravel impeded older adults' safe movement outdoors.

Yeah, no [I don't go out]. Because there are always stones. And everything, there's sand. And little ice, ice, icy spots, and I fall in them.

Older adult 7.

Equipment, such as handrails outdoors and ready-placed equipment for recreational activities, was considered to facilitate physical activities, also during family visits.

Both older adults and nurses mentioned that the lack of clothes and shoes impeded going outdoors. Nurses considered that high-quality, well-fitting shoes were important for walking indoors and especially for going outdoors. Some units had clothing reserves that were used for lending clothes to older adults.

In our ward, we always have spare clothes. You can always find them in our warehouse. We have some older adults coming with no own clothes. We are giving them all the time. Borrowed. We are able. The same, winter coats and shoes can be borrowed.

Nurse 3.

### 5.2.2 | Moving in the institutional environment

This theme was distinct from other data in terms of how the older adults' activity and mobility within the facilities related to two institutional attributes of the environment: the enclosed living setting, depicted in the sub-theme *Restricted freedom of movement*, and the imposed social environment, depicted in the sub-theme *(Un)pleasant social environment*. These attributes are characteristic of institutional living compared to living in one's own home.

#### *Restricted freedom of movement*

The older adults' movement was limited mostly to their wards due to the locked-door policy in place in all of the units. Nurses had taken several photographs of locks, gates and doors that were locked. They said that closed wards and institutions kept residents with dementia safe but restricted their freedom of movement.

We have closed units. So, because it's about people with memory disorders ... It's a good thing that we don't have to keep looking for them from the streets and markets, but of course it limits their freedom of movement.

Nurse 2.

Older adults seemed to take the locked-door policy as a given. They did not contest the doors being locked nor reflected more in depth on the policy, but they talked about it and showed the wards' locked doors to the researcher (Picture 6).

I'm locked in here. This is that kind of a place for me.

Older adult 4.

Nurses had taken some photographs of common indoor areas outside of the units. Older adults had to be especially given access to these spaces, and they related that they visited them rarely. Some



PICTURE 6 A friend to help (photograph by nurse).

older adults were allowed to go outdoors independently. To do so, nurses needed to open the doors.

We have the fenced yard, but they can't get in there either, because they can't get out of the unit. There are residents, so that when they are allowed to do so, they can go to the inner courtyard themselves. But it always requires that they come and ask, so they can't always go at the moment they want.

Nurse 1.

One of the units had a smart-lock system, allowing, in theory, access outside of the ward and outdoors for some of the older adults. This system was liked by the nurses. However, the system had not been in use for 2 years, as all wards had been locked to prevent the spread of COVID-19.

In addition to the locked-door policy, older adults' freedom of movement was restricted by the use of restraints, such as removing mobility aids. Nurses saw this as unwanted practice that took place with the rationale of safety.

#### *(Un)pleasant social environment*

The social environment was discussed by both the older adults and staff members in relation to the older adults' activity and mobility. Nurses considered that doing activities together was motivating for the older adults, and the example of others helped to engage more passive older adults in activities as well.

... there is also that social dimension that they go together. They have like a clear and good goal where they are going. It's really nice that it gets like, friends encouraging each other, let's go. The goal doesn't

matter so much, but the fact that the journey is done together, that's nice.

Nurse 1.

... of course, if there's exercise or something like that, it's usually worth having a few so they inspire each other.

Nurse 2.

Eating and spending time together in the common area was perceived to be a reason for the older adults to leave the resident room. Nurses had taken photographs of the older adults together in these activities. They thought that the older adults could also help each other to be mobile (Picture 6).

Older adults also talked about having friends to do activities with, and the elevated joy of doing activities with other people, and spending time with them in the common areas.

It is [nice to go outdoors with a group]. It's always that kind of chatter, and it makes you feel at home this babble [...] I'm always going if someone asks.

Older adult 5.

On the contrary, older adults also talked about being lonely and not having enough company they felt connected with in the facilities. In addition, older adults mentioned that they restricted their mobility in the facilities because it was somehow unpleasant to communicate with the other older adults or staff members, or the other older adults acted in a disturbing way.

Sometimes when I'm in a good mood I go there [to the dining room to eat] [...] They talk, they would love to talk to me, but if they can't hear anything, and you can't really understand what they're saying, it's very difficult for me.

Older adult 8.

### 5.2.3 | Passivity as a norm

Activities were extensively discussed, both by the nurses and the older adults, as well as depicted in the photographs. Despite the fact that activities were extensively discussed, they were mostly passive activities and physical activities were sparse. Therefore, we named this theme *Passivity as a norm*. We identified two distinctive sub-themes relating to this, one relating to the *(In)activities of daily life* and the other to exercise, named *There are facilities and equipment for exercise but no one to facilitate it*.

#### *(In)activities of daily life*

According to the older adults and staff members, the older adults' daily life comprised mostly of passive activities, such as resting, reading, listening to music, watching television and movies, having

chats with others and doing handicrafts (Picture 7). Some older adults did not aspire to more things to do. For example, one older adult related being content with her everyday life:

In the morning, we get up, change clothes, then go to the dayroom, sit there until probably five o'clock [...] Watching TV. That's all there is.

Older adult 10.

Some older adults felt that there was nothing to do, and they had to be too passive.

That kind of tidying I try to do, but it shouldn't be the only thing I do [...] I used to walk everywhere and move a lot [...] But mostly I've been here in place and wondered a bit about the walls, why I'm here talking to the walls.

Older adult 6.

Scheduled activities, such as musical activities, games such as bingo, hobby crafts, holiday-related crafts and events such as concerts, were reported to be organized once or twice a week in the units by recreational activity personnel. Normally, some joint activities were also organized for all residents of the facilities, but due to COVID-19, these had not been taking place. Nurses could also organize recreational activities spontaneously, or use students in clinical placement to do so.

I think it's really nice to have this kind of guided activity. But then there is also supplies available, if there comes a moment in the afternoon when the nurse can organize something ex tempore, then it's also possible.

Nurse 1.



PICTURE 7 Watching television (resident).

If we have students, we let them do recreational activities.

Nurse 4.

Older adults related that they liked the recreational activities that were organized. However, some said that they missed some of their previous activities. Outdoor activities occurred less during the winter season. Nurses considered that the older adults did not like going outdoors as much during the winter or if the weather was bad. Some older adults agreed. However, some older adults felt that they would like going outdoors, also during other seasons.

But I'd like to get out more, like, I wouldn't like it so much to stay here all the time. I'd like to get out more to move.

Older adult 6.

It differed how nurses and the older adults talked about restorative or function-focused care, that is, aiming to support the residents' independency by doing with rather than doing for.

This is important. And also, when we have students, we teach them that this is really important.

Nurse 3.

Nurses reflected that they used restorative care to support the older adults' mobility, and to maintain their functioning. However, older adults using wheelchairs related in individual discussions that they were not mobilized at all, or that they would like to do so more than was possible.

I don't move or, this [wheelchair] is where I sit

Older adult 10.

*There are facilities and equipment for exercise but no one to facilitate it*

Both the nurses and the older adults expressed the importance of maintaining functioning by exercising. Staff members had taken photographs of gyms and exercise equipment in the units. They thought the facilities and equipment were adequate for the older adults and easy to use.

They're easy to get into, easy to use. The device guides, I think it has a voice guidance, I think. And then there's, I think, you can save them so that it recognizes the resident, so that it can set the weights correctly and ready.

Nurse 1.

In all of the facilities, gyms were located outside of the unit where the older adults lived. They stated that they missed going to the gym.

I'd do gymnastics, but you can't do it when it's forbidden to go down there. And I was always there, twice a week.

Older adult 2.

Older adults reflected that the gyms had been closed since the COVID-19 pandemic had started. However, nurses related the restricted training opportunities rather to organizational factors (Picture 8), such as shifted responsibility for organizing training.

Now nurses have been trained to take older adults to the gym. But this ends up being another, like, "yes, thank you, yes, it would be nice if we had the time".

Nurse 2.

In previous times, physiotherapists had organized exercise groups and individual training for the older adults but this no longer took place.

A referral to a physiotherapist will get you a visit, but it will literally be a visit. I don't even know if we've had any active physiotherapy periods in two years. We are talking about a big house, after all.

Nurse 1.

Older adults felt that if they wanted to exercise, they had to do so independently and taking their own initiative. However, for most older adults who expressed this, the opportunities for doing so were limited because of severe limits in physical function. For example, one older adult shared:

So what you want [to do] yourself, some hand movements and [shows hand movements with one hand], and then I try this other hand [shows the other hand, which is paralyzed]. No, no, I have quite a few things I can do.

Older adult 2.



**PICTURE 8** Gym with lots of equipment, limited use due to staff shortage, no physiotherapist (photograph by nurse).

Some units had sitting cycling devices that the older adults could also use independently. However, the nurses felt that most of the older adults required the initiation of the nurses to start exercising.

## 5.2.4 | Nurses should act differently and have the resources to do so

The last theme was mostly developed based on the group discussion by the nurses. The theme presents aspects relating to the nurses' own actions that they reflected upon in the group discussion, based on the photographs, and factors they found to relate to this.

Nurses identified that better support of the older adults' activity and mobility requires a new kind of thinking and acting from themselves, such as seeing the older adults as active doers instead of passive recipients of care.

But we may think in such a limited way that we can ask these elderly people to do. They would be happy to do all these kinds of small chores and, like, butter the bread. And pour the milk themselves. If we gave them the opportunity.

Nurse 1.

The nurses reflected that they became institutionalized as professionals and performed routines, and wished for a more experimental care culture. The use of new technology was seen as an opportunity to facilitate activity and mobility, and could free up time.

For this pedaling device it would be pretty great, like they have been made, videos, they are like when it's connected to the pedal device, we could put in there, like, a city where you are from, and you go out and pedal on those familiar streets. And you can go to Spain or somewhere else, so it's pretty cool

Nurse 2.

One thing that has freed up a lot of time is the automatic dispensing of pills [...] so we have more time to do things with the residents because we don't need to fill in pill dispensers. It has been a really big thing.

Nurse 1.

Due to lack of time, the nurses could not organize as many activities for the older adults as they would have wanted. Doing for was faster than allowing the older adults to do things themselves when there was a lack of time.

So there's a worry that everything gets done, so you forget about residents buttering their own bread. You probably shouldn't. But unfortunately, that's how it goes.

Nurse 1.

According to the nurses, the lack of time was a consistent problem because of the shortage of staff. In addition, the extensive use of different substitute staff was a stress for them, because these staff were inexperienced or did not take on as much responsibility.

For example, a nurse comes to the place, and she says to me she has never seen a patient lift, so I should show [...] So basically, I was doing her work there.

Nurse 4.

In addition, the nurses felt that they had to increasingly take care of non-nursing tasks.

All the time they are adding more tasks of this sort to our work. Like beyond care. Now we are really already cooking the older adults' porridge in the units.

Nurse 2.

The nurses missed the opportunity to be spontaneous and organize activities for the older adults as they had done in the past, and to spend one-on-one time with the older adults. The older adults referred to the nurses being busy or the nurses not having time for them.

I'm sure the nurses don't mean any harm, but they never have time for us, to talk with us.

Older adult 8.

However, they also expressed trust in the nurses and felt the nurses were there for them when needed.

## 6 | DISCUSSION

We identified four themes in terms of the older adults' and nurses' perspectives on the current institutional long-term care environment for the activity and mobility of older adults and how the environment should be improved. The themes related to the design and equipping of the facilities, the institutionality of the environment, the passivity of daily life, and the nurses' daily practice and resources.

Considering the physical environment, recently built facilities got more praise from the participants compared to older facilities, implying a shift in a positive direction, for example, being more spacious, and therefore, more accessible for persons using wheelchairs. It should be noted that some design attributes that were raised as impediments could be fixed at a relatively low cost, such as the colours of floors. Used facilities should be renovated, considering the existing evidence of the factors related to the activity (Anderiesen et al., 2014; Benjamin et al., 2014; Douma et al., 2017; Narsakka, Suhonen, Kielo-Viljamaa, & Stolt, 2022) and mobility (Narsakka, Suhonen, & Stolt, 2022; Rommerskirch-Manietta et al., 2021) of older adults, and the know-how of the users. The varying quality of the physical environments place the older adults in unequal positions, considering their unnegotiable need to live in an institutional setting they have minimal influence on.

In the present study, recently build facilities had enclosed outdoor areas. However, unit doors were being locked and opened upon request for some residents. The right of a person to decide to independently move from one place to another is conceptualized as freedom of movement (van Liempd et al., 2022). Having freedom of movement in semi-open (having independent access outdoors within the facilities) or open settings (having access beyond the facilities) can have a positive influence on various physical, psychological and emotional health outcomes of older adults with dementia (van Liempd et al., 2022). Instead of protectionism, the benefits, and actual risks and harms of having independent access to outdoor areas should be clearly considered together by professionals, older adults and family (van den Berg et al., 2020). Furthermore, self-determination includes the right to take risks, which older adults with dementia should also be entitled to.

Passivity of daily life and the lack of support for physical activity and mobility were some of our findings, resonating with earlier evidence (Kangasniemi et al., 2022; Kehusmaa et al., 2021). Furthermore, despite motivation or initiation, all older adults should be supported to be active and mobile because of the important health benefits, and be educated about these benefits (Peyrusqué et al., 2023). Nurses play a pivotal role in this. Various strategies, such as breaking sedentary time, supporting physical activity in transfers and organizing physically active recreation, can be used (de Souto Barreto et al., 2016). Furthermore, doing things with the older adult rather than doing things for him/her helps the individual optimize his/her physical function and increase time spent in physical activity (Resnick, 2012), and has been observed to be effective in improving physical functioning outcomes (Lee et al., 2019).

In the present study, the nurses did identify that they should do things differently and hoped for a more experimental culture for activity promotion. For a culture change, nurses are important actors themselves and should take responsibility for developing their own professional practice, knowledge and skills. However, values and policies affect behaviours (Hitlin & Piliavin, 2004), and organizational values shape professionals' ethical standards (Sastrawan et al., 2021). Therefore, it is important that residents' activity is valued and promoted also at the organizational and managerial levels (Narsakka, Suhonen, Kielo-Viljamaa, & Stolt, 2022; Peyrusqué et al., 2023).

Furthermore, the lack of staff resources and time were mentioned by the nurses as affecting the organizing of activities for residents, and were also earlier identified as impediments for the activity of older adults (Benjamin et al., 2014; Douma et al., 2017) and relate to the quality of care (Boltz et al., 2020). For example, the participating units had reduced the use of physiotherapists and organized training for older adults. Considering the strong evidence of a positive association between training and the health and functioning of older adults in institutional long-term care (Crocker et al., 2013), this is not evidence-based practice. Furthermore, incorporating rehabilitation professionals such as physiotherapists and occupational therapists in care planning and delivery beyond training could benefit activity- and mobility-promotion. Considering the multimorbidity

and various functional limitations of older adults in institutional long-term care, interprofessional teams are vital to provide high-quality care (Doornebosch et al., 2022). Also, promoting volunteer and family members' participation, for example in organizing activities, could be one strategy to increase the activity and improve the mobility of residents. Family involvement has been observed to be positively associated with the quality-of-life of older adults and to improve the quality of care (Gaugler & Mitchell, 2022).

As the COVID-19 restrictions to varying extents were in force for 2 years at the time of data collection, especially older adults' perspectives on their daily life most likely reflect what they had experienced during this time. Nurses discussed in the group discussion the fact that residents' activity and mobility had been affected by the COVID-19 pandemic as going to the communal spaces of the facilities or doing trips beyond the facilities, and facility-shared activities, such as concerts, had not been allowed. At the time of the group discussion, pre-pandemic practices had been started to be enforced again. Based on our data, the overall story of our analysis and the developed themes reflect the daily life of the participating units beyond the COVID-19 pandemic. For clarity, we have reported participants' perspectives related to the COVID-19 pandemic in the corresponding themes.

Based on our evidence, there is a need for improvements that consider the institutional long-term care environment for the activity and mobility of older adults. Improvements are needed for the design of facilities, opportunities for freedom of movement, outdoor activity, daily life activities, exercise, nurses' role in activating older adults and required resources. It has been stated that actions should be taken concurrently at multiple levels of the environment to activate older adults in institutional care (Benjamin et al., 2014; Narsakka, Suhonen, Kielo-Viljamaa, & Stolt, 2022); our results resonate with this finding.

## 6.1 | Strengths and limitations of the work

A strength of our study was investigating the perspectives and experiences of the two most important sub-groups, which provided practical and change-oriented knowledge (Wang & Burris, 1994). The chosen data collection procedure with staff members was a well-suited way to collect data during the pandemic. Tangible things are somewhat easier to picture, and they were presented more frequently in the photographs. However, the nurses had also employed creative ways to picture intangible factors. Furthermore, the photographs elicited discussion among nurses on various aspects of the multiple dimensions of the environment, so that they also became critical of themselves (Novek et al., 2012) and experienced empowerment. A limitation of our study is that only four nurses participated in the group discussion despite our efforts to organize a second discussion.

We originally planned to engage the older adults themselves in taking photographs. However, the researchers' presence on site was not possible for longer periods due to COVID-19, nor could we employ

the nurses to facilitate photographing, as has been successfully done in residential care settings before (Lood et al., 2023). Nonetheless, taking photographs prompted some of the older adults to reflect on their environment. In one unit, during the data collection with three older adults, the primary nurse of each older adult was present. This should be considered a limitation of the study. However, these older adults raised similar, also critical, topics as the older adults in other units. Furthermore, we included only those older adults who could consent to participating on their own, thereby excluding older adults with severe dementia. However, the participants had varying cognitive function, physical impairments and health conditions.

In Finnish, 'activity' and 'mobility' are referred to with the same word (*liikkuminen*). To avoid limitations of the research process in relation to language, we conducted the analysis process in the original language (van Nes et al., 2010) by researchers familiar with the used concepts in the original and in the English languages. However, some meaning could have been lost in the translation process of quotes and themes.

## 6.2 | Implications for research, policy and practice

The results have several implications for research, policy and practice. We recommend that, to implement evidence-based practices to promote older adults' activity and mobility in institutional long-term care, action research and educational and culture change interventions could be experimented with. Physical activity promotion may be incorporated as an integral part of nursing practice, and the required knowledge and skills development should be integrated in (continuing) education. Resources should be allocated to enable older adults to meet the evidence-based guidelines for physical activity. Furthermore, regulations could be used to ensure that all older adults can benefit from a long-term environment that promotes their activity and mobility. The use of closed settings for care should be thoroughly evaluated, as there is evidence of the benefits for older adults living in semi-open and open long-term care settings (van Liempd et al., 2022).

## 7 | CONCLUSIONS

Our findings have clarified the current institutional long-term care environment for the activity and mobility of older adults. They have pointed to the aspects that need to be improved to increase the physical activity and improve the mobility of older adults, and the evident need for taking actions. Improvements are needed for the design of facilities, opportunities for freedom of movement, outdoor activity, daily life activities, exercise, nurses' role in activating older adults and required resources. The findings were made possible by investigating the perspectives and experiences of older adults living and their carers working in these settings. The findings have provided change-oriented knowledge that can be used to improve practice and policy, and for further research.

## AUTHOR CONTRIBUTIONS

Noora Narsakka, Riitta Suhonen and Minna Stolt designed the study with feedback and input from Barbara Groot. Noora Narsakka conducted data collection, and primary analysis with feedback and consultation from Riitta Suhonen and Minna Stolt. Noora Narsakka wrote the manuscript with the help of critical review from Riitta Suhonen, Barbara Groot and Minna Stolt. All authors have given permission of this version to be published.

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## CONFLICT OF INTEREST STATEMENT

We declare not to have any conflicts of interest.

## DATA AVAILABILITY STATEMENT

Research data are not shared.

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## SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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