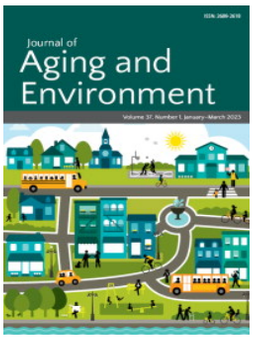

Routledge
Taylor & Francis Group

Journal of Aging and Environment

ISSN: (Print) (Online) Journal homepage: https://www.tandfonline.com/loi/wjhe21

First-Line Managers' Leadership Behavior Profiles and Use of Gardens in Residential Care Facilities: An Interview Study

Eva Dahlkvist, Marita Wallhagen, Eva L. Bergsten, Johan Larsson & Ingela Enmarker

To cite this article: Eva Dahlkvist, Marita Wallhagen, Eva L. Bergsten, Johan Larsson & Ingela Enmarker (2023) First-Line Managers' Leadership Behavior Profiles and Use of Gardens in Residential Care Facilities: An Interview Study, Journal of Aging and Environment, 37:1, 65-84, DOI: 10.1080/26892618.2021.2001707

To link to this article: https://doi.org/10.1080/26892618.2021.2001707

Published online: 11 Nov 2021.

JOURNAL OF AGING AND ENVIRONMENT
2023, VOL. 37, NO. 1, 65–84
https://doi.org/10.1080/26892618.2021.2001707

First-Line Managers' Leadership Behavior Profiles and Use of Gardens in Residential Care Facilities: An Interview Study

Eva Dahlkvist[a], Marita Wallhagen[b], Eva L. Bergsten[c], Johan Larsson[c,d,e], and Ingela Enmarker[a]

[a]Faculty of Health and Occupational Studies, University of Gävle, Gävle, Sweden; [b]Faculty of Engineering and Sustainable Development, University of Gävle, Gävle, Sweden; [c]Department of Occupational Health Sciences and Psychology, University of Gävle, Gävle, Sweden; [d]Department of Occupational Health and Safety, LKAB, Gällivare, Sweden; [e]Human Work Sciences, Luleå University of Technology, Gävle, Sweden

ABSTRACT

This study explored first-line managers' leadership behavior profiles regarding their goals for utilizing the garden at residential care facilities for older people. Semi-structured interviews were conducted with a convenience sample of first-line managers ($n = 12$) in Sweden. Data were analyzed using deductive content analysis theoretically guided by the Three-dimensional Leadership Model. The results showed that the main leadership behavior profiles were related to the dimensions structure, relation and change. The managers emphasized workplace regulations and goals. They allowed staff to make decisions and encouraged them to see problems and opportunities.

KEYWORDS

Older people; first-line managers; garden; leadership

Introduction

First-line managers' (FLMs') role at residential care facilities (RCFs) includes assuming responsibility for organizational and financial issues, managing human resources and creating collaborative teams so as to promote good care (McCallin & Frankson, 2010). The attributes of FLMs' managerial competence include individual development as well as planning and managing legal and ethical issues (Gunawan & Aungsuroch, 2017). The work situation for FLMs often entails dealing with complex and challenging tasks, which may lead to experiences of satisfaction or hopelessness (Hagerman et al., 2015). An important starting point for FLMs' leadership in Sweden is adhering to the regulations and national fundamental values, which regulate staff members' duty to deliver care with respect for older

CONTACT Eva Dahlkvist evadat@hig.se University of Gävle, Gävle, SE-80176, Sweden.

people's dignity and well-being (SOU, 2008). In recent years, the care of older people in Sweden has undergone several changes that involve decreasing staff resources, at the same time as older people's life expectancy is increasing (National Board of Health & Welfare, 2020).

Even though the design of the buildings vary, most RCFs in Sweden are organized in a similar fashion. The apartments/rooms are usually reachable through common areas on units consisting of corridors, dayroom, kitchen and dining room (Andersson, 2005; Nord, 2013). Older people living in RCFs in Sweden require extensive formal care due to health problems such as multi-morbidity (Akner, 2009), difficulties performing activities of daily living (Björk et al., 2016), dementia (Bacigalupo et al., 2018) and pain (Takai et al., 2014). Therefore, it is not unusual that they spend the majority of the day in their own apartments/rooms (Nord, 2013), which may lead to worse health due to feelings of loneliness, anxiety, depression, worthlessness and passivity (Elias, 2018).

Several studies have shown that regular outdoor visits in natural environments and gardens may have health-promoting, stress-reducing and restorative effects. Hartig et al. (2014) found evidence for human health benefits through contact with nature: air quality, physical activity, social cohesion, and stress reduction. Contact with nature may lead to a variety of restorative effects related to emotions, cognition and the ability to deal with demanding circumstances (Berman et al., 2008). Research (Dahlkvist et al., 2016; Rappe et al., 2006) has demonstrated a significant positive relation between garden greenery and residents' self-perceived health in conjunction with garden visits at RCFs. In line with these results, studies by Hernandez (2007) and Raske (2010) have demonstrated that garden visits may improve residents' health and quality of life. Recent studies have also shown that garden visits are important in stimulating the residents' perceptual senses (Dahlkvist et al., 2020; Yari et al., 2021), as well as becoming more in harmony with life, find comfort, to feel healthy and alive with opportunity to relate to the past and present (Magnussen et al., 2021). Results from two studies (Rappe & Topo, 2007; Gonzales & Kirkewold, 2015) indicated that staff regarded stays in a green outdoor environment as health promoting for residents and that outdoor visits can facilitate natural conversation topics between residents and staff.

The type of outdoor space that constitute a garden at RCFs in Sweden, can be referred to in a questionnaire study of Dahlkvist et al. (2014), where FLMs from a total of 87 RCFs in three regions and 13 municipalities in central and northern Sweden participated. The main perimeter design elements and characteristics of the surrounding outdoor environment were common gardens for all residents and those that were separated for persons with dementia. The areas varied between 18 and 4000 m^2 and were in

many RCFs visible from the dining room, kitchen and dayroom. The gardens were usually enclosed by a wooden fence with views at buildings and green areas. The main internal design elements of the gardens were walkways, circular or blind alleys consisting of stone paving. Other common features were shrubs, flowers, trees, lawns and raised garden beds (for more information see Dahlkvist et al., 2014).

However, the garden's design and accessibility do not always make it easy for residents living in RCFs to go outdoors to the extent they wish. Two studies (Kearney & Winterbottom, 2006; Shu Lin et al., 2018) revealed that the main barriers to garden visits were the residents' own physical limitations, lack of assistance and uncomfortable weather conditions. Moreover, Dahlkvist et al. (2014) and Potter et al. (2018) reported barriers to residents taking themselves outdoors into the garden at RCFs (e.g., needing permission or assistance to go outside, long corridors, heavy/locked doors and stairs) and barriers keeping residents from moving around in the garden (e.g., sloping terrain, uneven paths and bushes). The described challenges faced by residents probably also mean challenges to staff in their daily work. Nevertheless, a pleasant accessible garden may be a health-promoting and restorative resource for residents. Through their leadership behavior, FLMs play a key role in realizing and supporting such resources.

The current study concerns FLMs' leadership behavior profiles regarding their goals for older people were they work. This focus was chosen as mangers have authority to manage, and distribute the work in an organization and, therefore, have a great influence on the priorities for the residents.

Theoretical framework

In the present study, the Three-dimensional Leadership Model is used as the basis for determining the participating FLMs' leadership behavior profiles. This model (consisting of the dimensions *relation*, *structure* and *change*) has strong empirical support, in that the dimensions of *relation* and *structure* have been confirmed since the 1940s, and the *change* dimension since the beginning of the 1990s (Arvonen, 2002; Ekvall & Arvonen, 1991; Yukl, 1999). The *relation* dimension includes behaviors such as giving support, being considerate, delegating authority and responsibility, and socializing with employees to build relations. The *structure* dimension includes behaviors such as formulating clear goals, allocating work by giving clear instructions to individuals, following up performed work and making a point of following rules and principles. The *change* dimension includes behaviors such as starting up development projects, introducing new work methods to achieve organizational goals, encouraging development, innovation and learning, and discussing new ideas and suggestions

(for further descriptions see Arvonen, 2002; Ekvall & Arvonen, 1991). In different ways, the three dimensions are associated with health, job satisfaction, sickness absence, disability pension, performance, quality, and effectiveness (Arvonen, 2002; Kuoppala et al., 2008; Skakon et al., 2010). In studies of common leadership behaviors in organizations that are healthy and effective, all three dimensions—*relation, structure* and *change*—are identified, particularly in organizations where a strong focus on practiced *relation*-oriented leadership behaviors has been found (Larsson & Vinberg, 2010).

To our knowledge, no previous studies have used the *relation, structure*, and *change* dimensions to examine the leadership behavior profiles of FLMs concerning use of the garden environment. Therefore, the aim was to explore FLMs' leadership behavior profiles regarding their goals for utilizing the garden at the RCF for older people where they work, and examine how their leadership behavior profiles correspond to the Three-dimensional model.

Materials and methods

Design

The present interview study employed a qualitative descriptive design (Elo & Kyngäs, 2008), theoretically guided by the Three-dimensional Leadership Model (Arvonen, 2002; Ekvall & Arvonen, 1991; Yukl, 1999). The qualitative descriptive interview design allows details and reflections to emerge that would not have been seen using predetermined response alternatives (Patton, 2015).

Sample and data collection

A convenience sample was used, where all FLMs ($N = 25$) working in municipal and private facilities—those that had gardens—were asked to participate in the study. The inclusion criterion was FLMs who had worked at least 12 months and dealt with staff and the unit's financial budget. In total, 12 of the 25 FLMs agreed to participate where all were middle aged women. The participants' working experience at the facility varied from 1 to 24 years, and their working experience in elderly care between 2 and 28 years. For participant characteristics, see Table 1.

Table 1. Participant characteristics.

Variables	Mean	*SD*	Median	Range
Age (years)	51.9	6.2	54.0	38–59
Working experience at the facility (years)	7.5	6.4	7.0	1–24
Working experience in elderly care (years)	13.3	6.3	12.0	2–28

Note. Twelve women attended (N=12).

The interviews were conducted in 12 RCFs in central Sweden where three of them were located in an urban area, seven in a suburban and two in rural areas. Data collection took place on one occasion during the spring of 2018 through site visits to the 12 RCFs. The first author conducted the individual in-depth interviews using a semi-structured interview guide (Brinkmann & Kvale, 2018). The interviews were audiotaped. The areas covered in the interview guide were meant to capture the three dimensions of leadership from Ekvall and Arvonen (1991) theory: *structure, relation* and *change*. Summary of topics asked were: "What goals do you have with the garden as a resource for the residents?", "How would you like the garden to be utilized as a resource for the residents?" and "What beneficial conditions exists to utilize the garden?" Complementary questions were asked when further clarification was needed, such as: Did I understand you correctly? Could you further describe and explain? The interviews had a mean duration of 50–70 min. They were conducted during the participants' working hours.

Data analysis

The interviews were analyzed using directed qualitative content analysis (Elo & Kyngäs, 2008), with a deductive approach based on the content of the Three-dimensional Leadership Model (Arvonen, 2002; Ekvall & Arvonen, 1991; Yukl, 1999). A deductive approach is appropriate when the analysis is derived from an earlier theory or model (Burns & Grove, 2005). A study is referred to as deductive when the research question is based from a theory and deduction moves from the theory to the specific (Elo & Kyngäs, 2008; Holloway & Wheeler, 2010; Patton, 2015). Initially, the interviews were transcribed verbatim, then listened to repeatedly to understand and become familiar with the text. Two of the research members (*blinded for review*) separately analyzed the written transcripts repeatedly to reach further understanding of the data. Thereafter, the data were condensed into meaning units that resembled or exemplified the three dimensions in the leadership model: *relation, structure and change*. Using words that expressed the core of the respective meaning units, the next step involved creating subcategories to the main categories in the Three-dimensional Leadership Model. The data were compared for similarities and differences in back-and-forth movements among the whole set of interview texts. To increase credibility and dependability, interpretation of the data was reflected on and discussed among all the authors. The data analysis was done manually without aid of any software.

Ethics

Permission to contact FLMs at RCFs was obtained from the municipality's head of administration. Verbal and written information were provided, and the participants gave their written informed consent. Prior to each interview, the researcher repeated the information concerning informed consent, ensuring that the data would be anonymized by using codes to represent participants. The Regional Ethical Review Board in (*blinded for review*) approved the study (Reg. no. 2017/390).

Results

The 12 FLMs worked in different RCFs located in urban, suburban and rural areas. For description of location, number of residents and level of care provided, apartment's size, type of garden and surrounding area, see Table 2.

Our analysis of the interviews resulted in five subcategories to the three main categories representing the leadership dimensions in the model: *structure*, *relation* and *change*. As can be seen in Table 3, FLMs' self-reported expressions during the interviews emphasize leadership behaviors that correspond to all three dimensions. Participants are coded with letters (A-L), and quotes illustrating the results are used to support credibility. For overview of examples from the data analysis, see Table 3.

Expressions related to the structure dimension of leadership

Clarifying expected results for a specific task

This was the most commonly used subcategory related to structure in the interviews, used by 11 of 12 FLMs. They talked about their own planning to give staff the prerequisites to utilize the garden. The expectation was that staff should assist residents who wanted to go outdoors: "In my planning, I give staff the prerequisites to stay outdoors with residents, but that presupposes that staff resources are sufficient" (D); "Based on my planning, I expect that the staff will assist residents who want to go outdoors" (C). They also talked about staff members' responsibility and initiative in achieving a result where all residents, including those with major limitations, are given regular opportunities for outdoor stays based on their own wishes: "If the residents have restrictions, then the air must come to them. It is the staff's responsibility; it must be easy to get outside" (F); "The staff must help residents who want to visit the garden to get out. … they must really get to know what each resident likes" (K). Furthermore, the managers talked about staff members' duty to offer residents opportunities for

Table 2. Description of location, number of residents and level of care provided, apartment's size, type of garden and surrounding area.

Location	Number of residents and *level of care provided	Apartments size in square meter	Type of garden and near surrounding area
Three one-story buildings with three units for persons with dementia located in an urban area.	10 residents with dementia	28–38	Three similar gardens reachable from a corridor at the inside of the building. The gardens is enclosed by fences and bushes. Furniture for seating and a hammock in each garden. Below lies a stone pavement with greenery around, a couple of raised garden beds for cultivating of vegetables, strawberries and rhubarb. Parasols are used as protection from sun exposure. The surrounding area consists of a park with trees and greenery, pharmacy, shops and restaurants.
One multi-story building with three floors located in an urban area. At the first floor there is a unit intended for persons with somatic- and persons with dementia diseases. On the second floor there is a unit intended for persons with somatic diseases and on the third floor a unit intended for persons with dementia diseases.	48 residents with somatic diseases 48 residents with dementia	35	Two similar courtyard gardens common for all residents. The gardens are enclosed by the surrounding buildings and the grounds consists of stone pavement. One pergola is located in each garden, seating furniture with tables, trees, bushes with black currants, raised garden beds with strawberries and flowers. Parasols and pergolas with plants are used as protection from sun exposure. The surrounding area consists of a park with greenery, a health center, pharmacy, shops and restaurants.
One multi-story building with three floors located in an urban area. The first floor is intended for persons with dementia diseases. On the second and third floor there is units intended for persons with somatic diseases.	40 residents with somatic diseases 28 residents with dementia	31	A courtyard garden common for all residents, enclosed by the surrounding buildings. The garden ground consists of stone pavement. Furniture for seating and tables, bushes with berries, a few raised garden beds with flowers, strawberries and spice plants. Awnings and parasols are used as protection from sun exposure. The surrounding area consists of the sea, a nearby railway station, shops and restaurants.
One multi-story building with five floors and six units intended for persons with somatic diseases located in a suburban area.	64 residents with somatic diseases	35	A garden common for all residents, enclosed with a wooden fence where the ground consists of stone pavement. Furniture for seating with tables, pots with planted flowers, a couple of hanging baskets with flowers and a decoration in the form of a relatively large wooden boat. Parasols are used as protection from sun exposure. The surrounding area consists of a smaller shopping center with forests nearby.
One multi-story building with four floors and four units intended for persons with dementia diseases located in a suburban area.	60 residents with dementia	32	A newly opened garden common for all residents, enclosed with a hedge where the ground consists of concrete. Furniture for seating with tables. There are plans to plant apple trees and flowers in pots. Parasols are used as protection from sun exposure. The surrounding area consists of a little stream where some ducks are swimming under a little bridge leading over to a smaller business center, both traffic and forests nearby.

(*continued*)

Table 2. Continued.

Location	Number of residents and *level of care provided	Apartments size in square meter	Type of garden and near surrounding area
One multi-story building with five floors and five units intended for persons with somatic diseases located in a suburban area.	64 residents with somatic diseases	29–47	A common garden for all residents, enclosed by a wooden fence and bushes. The garden ground consists of paved walkways, grass and some gravel. Furniture for seating with tables, garden beds with flowers, strawberries and potatoes. Awnings and parasols are used as protection from sun exposure. The surrounding area consists of forests with fir-and pine trees, a paved road for walking and a shopping center.
Two one-story buildings with two units intended for persons with dementia located in a suburban area.	59 residents with dementia	27–47	A common garden for all residents, enclosed by a wooden fence. The garden ground consists of grass and paved walkways. Furniture for seating and tables, a large box in wooden with perennial flowers, garden beds with potatoes, rhubarb and strawberries. There is also a greenhouse with growing tomatoes and cucumber. Awnings and parasols are used as protection from sun exposure. The surrounding area consists of forests with pine trees, a small grocery store and a health center.
One multi-story building with three floors and three units intended for persons with somatic diseases located in a suburban area.	18 residents with somatic diseases	26–42	A common garden for all residents, enclosed with a wooden fence and bushes. The ground consists of paved walkways and grass. One gazebo, furniture for seating with tables, apple trees, bushes with black currants, raised garden beds for cultivating of potatoes, strawberries and spices. In the garden there are also a rooster and a few hens. Parasols are used as protection from sun exposure. The surrounding area consists of woods, paved walkways and a kindergarten nearby.
A one one-story building intended for persons with dementia located in a suburban area.	44 residents with dementia	25–40	
A one-story building with two units intended for persons with somatic diseases and two units intended for persons with dementia diseases in a suburban area.	22 residents with somatic diseases 22 residents with dementia	31–37	A common garden for all residents, enclosed by a wooden fence and hedges. The ground consists of paved walkways and grass. There is a small meadow with flowers, flowers in pots, some apple trees and shrubs with black and red currants. Awnings and parasols are used as protection from sun exposure. The surrounding area consists of a health center, pharmacy and a small shopping center.
A one-story building with two units intended for persons with somatic diseases and one unit intended for persons with dementia located in a rural area.	34 residents with somatic diseases 16 residents with dementia	36–39	Five similar small gardens reachable from the corridor at the inside of the building. Two of the gardens are intended for persons with somatic diseases and three of the gardens is intended for persons with dementia. The garden grounds consists of stone slabs and are enclosed by a wooden fence, trees and bushes. There is seating with tables. Awnings and parasols are used as protection from sun exposure. The surrounding area consists of green areas and paved walkways.
A one-story building with two units intended for persons with somatic diseases and one unit intended for persons with dementia located in a rural area.	17 residents with somatic diseases 10 residents with dementia	26–36	Two gardens for persons with somatic diseases and one for persons with dementia reachable from a corridor inside the building. The gardens are quite similar and enclosed by a wooden fence. The ground consists of stone slabs and some greenery and there is a paved walkway around the house. There is seating furniture with tables, a common gazebo, trees, bushes, perennial plants, and raised garden beds with black currants, flowers and strawberries. Awnings, parasols and the gazebo are used as protection from sun exposure. The surrounding area consists of large green areas and pastures with cows.

Note. *Level of care provided: All residents require much formal care due to health problems e.g. multi-morbidity, ADL-difficulties, anxiety, depression and pain.

Table 3. Overview of examples from the data analysis.

Interview text	Condensed meaning	Subcategory	Category of leadership dimension
I expect that the staff will assist residents who want to go outdoors. The prerequisite is that they show a positive attitude about it.	I expect that the staff will assist residents who want to go outdoors.	*Clarifying expected results for a specific task.*	Expression of structure
The documented goals for residents rely on the Swedish Fundamental National Values and documentation of residents' desires in our local implementation plan. If we have documented that a resident regularly wants to visit the garden, the staff must assist this person in outdoor stays.	If we have documented that a resident regularly wants to visit the garden, the staff must assist this person in outdoor stays.	*Explaining workplace regulations, policies and routines.*	Expression of structure
I hope the staff feel my support and encouragement in the challenging work to calm residents with worry and anxiety. The visits and work in the garden may be a health-promoting resource even for staff.	I hope the staff feel my support and encouragement in the challenging work to calm residents with anxiety.	*Giving support and encouragement to staff.*	Expression of relation
I am sure that the staff do good planning and know the best way to work with residents in the garden.	The staff know the best way to work with residents in the garden.	*Allowing staff to decide the best way to solve a task.*	Expression of relation
It does not work for everyone, but staff should, instead of medication, try taking residents out into the garden. This may be health promoting and calming in cases of anxiety.	The staff should, instead of medication, try to taking residents with worry and anxiety out into the garden to calm them and promote health.	*Encouraging staff to see problems and opportunities in new ways.*	Expression of change

socializing and doing activities in the garden: "All residents should be offered daily outdoor visits and have opportunities for socialization" (G).

Explaining workplace regulations, policies and routines

Six of 12 FLMs focused on this subcategory. They talked about staff members' duty to use the garden, based on politician decisions and regulations in the Swedish Fundamental National Values (SOU, 2008): "Utilization of the garden is based on politician decisions and regulations, and the

implementation plan for residents. The staff must follow these regulations" (G); "If we have documented that a resident wants to visit the garden regularly, the staff must assist in these outdoor stays" (H). The managers also emphasized the importance of staff having the power and routines to realize residents' opportunities for outdoor visits: "It is important that staff take the power and use it correctly, based on routines and residents' desires to make outdoor visits" (E); "Residents' outdoor visits are based on staff members' ability to realize assigned work tasks and routines. Otherwise, this would be an important issue for me as a manager to solve" (G). However, the remaining six of these 12 managers said they based their decisions on their own established goals, instead of following regulations based on politician decisions:" No documented policy, routine or responsibility exists that specifically deals with how we should work with the garden. Documented goals for outdoor stays are missing, so I use my own set goals" (C). "There are no documented goals for residents' outdoor visits. My goal is that it should be nice and to give residents the feeling of being able to move freely. However, not everyone wants to go out" (A).

Expressions related to the relation dimension of leadership

Giving support and encouragement to staff

This was the most common subcategory of the relation dimension, used by 11 of 12 FLMs. Support and encouragement concerned the challenges of calming residents with anxiety. Furthermore, they expressed the belief that work in the garden was also a health-promoting resource for staff members: "I hope the staff feel my support and encouragement in meeting the challenge of calming residents with anxiety. The visits and work in the garden may be a health-promoting resource even for them" (B). They also talked about staff members' work in the garden and the positive impact it could have on their relationships with residents: "I think that the garden, as part of the working environment, is a health-promoting resource for the staff, … it might have a positive impact on their relationships with residents"(E). The managers also gave support and encouragement concerning staff members' use of the garden for recovery during their breaks, to help them cope with challenging work tasks: "I think outdoor stays during breaks are health-promoting for staff, so they can cope with their work. However, some of them need to be encouraged to take breaks and go out" (K).

Allowing staff to decide the best way to solve a task

Five of 12 FLMs talked about this subcategory. They mentioned that the staff usually know the best way to work with residents in the garden: "I

think the staff know the best way to work in the garden with the residents" (G); "I'm sure that the staff do good planning and know the best way to work with residents in the garden" (A).

Expressions related to the change dimension of leadership

Encouraging staff to see problems and opportunities in new ways

In total, 11 of 12 FLMs used this subcategory. They mentioned that they usually encourage staff to see opportunities in new ways, by using garden visits instead of medications to calm residents with anxiety;" It doesn't work for everyone, but the staff should, instead of medication, try to take residents out into the garden, it may be health promoting and calming in cases of anxiety" (L). The managers also encouraged staff to use the garden for residents in need of stimulation, thus using it for physical and/or passive activities:" For younger residents with dementia, who still have the energy, there is a lot to do. Such as weeding, watering flowers and picking black currants" (I);" Some residents have done weeding in their day and can no longer perform the activity, but it might be stimulating and health promoting just to join in and watch when others do it" (J). Furthermore, they talked about how they usually encourage staff to use the garden as an opportunity to stimulate the residents' perceptual senses and memories:" It's great, in our garden we have currant bushes. The residents can pick the berries and put them in their mouth and talk about memories with staff"(H);" I think the residents' senses and memories can be stimulated by garden visits, when they pick strawberries or see and smell a special flower"(I).

Discussion

The present study, which was based on the Three-dimensional Leadership Model (Arvonen, 2002; Ekvall & Arvonen, 1991; Yukl, 1999), aimed to explore the FLMs' leadership behavior profiles regarding their goals for utilizing the garden at the RCF for older people where they work, and to examine how their leadership behavior profiles correspond to the Three-dimensional model. The overall results revealed that the behaviors of importance were related to all three dimensions of leadership: *structure, relation* and *change*. Subcategories for the *structure* dimension mentioned by the managers focused on clarifying the results expected for a specific task and explaining workplace regulations, policies and goals. Behaviors in the *relation* dimension focused on support and encouragement in challenging work tasks and allowing staff to decide the best way to solve tasks. The

change dimension focused on encouraging staff to see problems and opportunities in new ways.

Structure-oriented leadership behaviors

The most common leadership dimension was related to the *structure* dimension. The FLMs emphasized that opportunities to achieve an expected work result were facilitated through structured planning, the aim of which is to give staff prerequisites for their work. Their expectation regarding staff members' work task was that they should assume responsibility for giving all residents opportunities for outdoor visits and activities. Their expectation regarding staff members' work task was that they should assume responsibility for giving all residents opportunities for outdoor visits and activities. The importance of opportunities for outdoor visits are confirmed in a study of Dahlkvist et al. (2020) where residents themselves described that lacked possibilities to go outdoors may lead to disappointment and reduced well-being. The need for stimulus through outdoor activities is also in line with the result in another recent study where staff working in RCFs indicated that lack of possibilities may result in residents' restlessness, boredom and a wish to leave (Lee et al., 2021). Previous studies have also shown that exposure and visits to gardens containing a great deal of greenery may counteract fatigue and boredom, mitigate stress, promote health and offer restorative effects for residents (Dahlkvist et al., 2016; Rappe et al., 2006; Gonzales & Kirkewold, 2015). The managers' clarifications of expectations concerning staff members' work duties may result in the positive benefits of outdoor visits being utilized in a better way. Nevertheless, if the managers' control is too strong, staff members' ability to take the initiative themselves and come up with solutions may be impeded, leading to poorer goal fulfillment. Nyberg (2009) identified important aspects of health-promoting leadership: being considerate toward staff, delegating responsibility, socializing to build relations (*relation*-oriented leadership behaviors), and, if necessary, complementing with *structure*-oriented leadership, especially in stressful work situations. This is in line with Karasek and Theorell (1990) demand-control-support model, which posits that high levels of demand combined with possibilities for decisions and social support may result in a stimulating and challenging work situation associated with low risk of both ill health and decreased well-being. Given the problem complex that exists, using the *structure* dimension may sometimes be justified to a moderate degree; otherwise, there is a risk that opportunities for health-promoting visits to the garden for residents will not be realized.

Some of the FLMs also illuminated the staff members' duty to use the garden based on politician decisions and the regulations in the Swedish Fundamental National Values (SOU, 2008). This leadership behavior may be positive, as it focuses on following the regulations required to meet the specific aims of a work task (Aarons, 2006). Active communication between managers and staff is necessary to create an understanding of and knowledge about the regulations and values that concern residents' rights. However, not using any documented policy, routine or responsibility that specifically deals with how they should work with the garden other than their own goals for staff at the workplace emerged as well. This implies a form of leadership that disregards the regulations required for care of older people living in RCFs, as the manager avoids giving directions and making decisions, leaving the staff to deal with such situations on their own. Moreover, the regulations are not used to motivate staff to take residents outdoors and into the garden. This behavior characterizes a passive, laissez faire leadership style, which entails the absence of constructive leadership (Kaluza et al., 2020). Lack of directions and decisions may result in conflicting expectations regarding who is responsible for the task. Once again, the need for a balanced moderate level of *structure*-oriented leadership behaviors to support use of gardens is stressed.

Relation-oriented leadership behaviors

Nearly all of the FLMs used the leadership dimension of *relation*. They talked about how to support staff by giving them necessary prerequisites and free hands in their use of the garden. How to give them responsibility and trust in the challenging work of calming residents with anxiety, as well as about how they encourage staff to utilize the garden for their own recovery during breaks. The association between relational leadership behavior and various staff health outcomes has strong empirical support (Kuoppala et al., 2008; Skakon et al., 2010). Hence, based on these systematic reviews and meta-analyses, the prerequisites for job satisfaction and health among staff may increase if the manager practices leadership behaviors corresponding with the relational leadership dimension. Improving staff members' health, i.e., promoting greater well-being, may in turn increase the likelihood that staff will contribute to promoting residents' well-being. Kouzes and Posner (2003) described the need for managers to foster collaboration by building mutual trust and supporting employees in performing work tasks on their own, thus allowing them to realize their full potential. In line with this, Josefsson et al. (2011) found that managers who give opportunities for intellectually stimulating work, combined with freedom and a sense of independence, are important for nursing staff. Thus,

support, encouragement and confidence in staff members' ability to perform work tasks can help them grow in their own professional role, thus providing a better workplace with a high degree of goal fulfillment for residents. In addition, the present results also indicate the need for pronounced *relation*-oriented leadership behaviors.

Change-oriented leadership behaviors

Practically all 12 FLMs used the leadership dimension of *change*. They mentioned regularly encouraging staff to see problems and opportunities in new ways. For instance, they talked about the garden as a calming, stimulating and health-promoting resource, to be used instead of medications for residents with anxiety, for those in need of activities and for stimulation of the senses and memories. These findings may be understood in relation to a study by Detweiler et al. (2008), who found that residents with dementia who spent more time outdoors and participated in activities showed less aggression, verbal agitation, improved sleep and reduced need for behavioral medications. In the study of Dahlkvist et al. (2020) it was also shown that activities such as conversations about the garden e.g. flowers and pets, may stimulate residents' senses and evoke memories from the past.

According to Arvonen (2002) and Ekvall and Arvonen (1991), a manager who uses the leadership dimension of *change* begins development projects by communicating goals and visions and encouraging staff through discussions of new ideas and suggestions. However, in the present study, the managers' expectations concerning staff members' implementation of work tasks may be associated with challenges. Previous studies have revealed many prerequisites that must be fulfilled before residents can go outdoors in gardens at RCFs. Important aspects here are residents' own physical preconditions, their dependence on staff members' attitudes and willingness to assist them in outdoor visits and weather conditions (Kearney & Winterbottom, 2006; Shu Lin et al., 2018). Furthermore, design characteristics marked by poor coordination between interior and exterior spaces—e.g., long corridors and stairs as well as obstacles in the garden, such as uneven ground that increases fall risks—may clearly reduce the garden's accessibility and utilization (Dahlkvist et al., 2014). Given the problem complex that exists, and because a garden is always growing and changing, the leadership dimension of *change* may be justified. FLMs who communicate goals and visions and who discuss new ideas with staff may succeed in making the garden more accessible, well adapted and restorative for users. However, some *change*-related goals are more costly (e.g., long corridors and stairs). Such goals must be realized in the long run and require the

support of higher-level managers and politicians. Some other goals are less costly, e.g., providing greenery and flowers for multisensory stimulation, and can therefore be realized in the short term. This indicates the need for pronounced *change*-oriented leadership behaviors to support the use of gardens.

Previous research has examined whether there are any differences between females and males concerning leadership. Stereotypical characteristics attributed to male and female managers are proposed e.g. Hoyt et al. (2009). At the same time, the majority of studies conclude that there are no significant differences in the leadership behavior when it comes to females and males (Andersen & Hansson, 2011; Powell, 1990; Yukl, 2009). In this study, where only female managers are included, we assume based on the conclusion in above mentioned studies that there would have been no significant differences in leadership behaviors between the sexes if male managers would have been interviewed in an equal setting. This assumption needs to be studied and validated in further studies. Further, the skewness in this study is influenced by the overall skewness in Swedish labor market, i.e. there are significantly more female FLMs working at RCFs in Sweden.

In sum, the present results indicate that all three leadership dimensions were used by the FLMs, to different degrees, to support use of the garden at the studied RCFs. This is in line with earlier studies showing the need to practice the *relation, structure* and *change* dimensions when working with leadership (Ekvall & Arvonen, 1991; Larsson & Vinberg, 2010).

Limitations and future suggestions

One of the study's limitations is the convenience sample. About half of the FLMs we approached agreed to participate, of which all were women. The sex and gender aspect was never included in the present study, consequentially this might be a limitation. At the same time studies shows no significant differences in leadership behavior between male and female managers which reduces the implication of this limitation.

It may also be that the participated managers had a more positive attitude toward using gardens and, thus, more positive and similar leadership behavior. Further, we only studied the leadership behaviors of managers, leaving out how staff members perceived the leadership. Future research would benefit from evaluating leadership behaviors in human care and the use of gardens quantitatively, including male managers for validation. Further, evaluating a larger sample of other staffs' perceived leadership quantitatively is recommended.

Conclusion

All three leadership behavior dimensions are identified as being important to the FLMs' goals for utilizing the garden at the RCF where they work. The specific leadership behavior profile found to increase garden visits includes a more pronounced *relation*- and *change*-oriented kind of leadership supported by moderate *structural* leadership behaviors. The highlighted behaviors are formal planning, goals, visions and routines as well as manager support and encouragement to provide conditions that enable staff to assume responsibility and take initiatives for garden use. The present results indicate that the managers view gardens as health promoting for both residents and staff and consider gardens to be a resource that can strengthen and develop staff-resident relationships. The results also suggest that different leadership behaviors can have different implications. If the managers' approach is top-down and their control too strong, this may impede staff members' ability to take the initiative on their own. The reverse situation, where staff have completely free hands in their professional practice, may cause them to choose their own ways, which may deviate from established goals. Managers may succeed in their leadership by being themselves, but also by using different leadership behaviors based on the demands, actual situation and contextual circumstances. The staff may need support, encouragement, knowledge and guidance to feel inspired about the value of outdoor visits, as well as to accept the challenge of assisting residents who want to go outside regularly. The leadership behavior profile identified could be used as an inspiration for other managers interested in increasing use of the garden at the RCF for older people where they work. The results could also be presented at leadership development courses for managers and university students in, e.g., nursing programs. We believe that our findings are important as well as useful knowledge to support recruitment and training of managers in processes of implementing and utilizing gardens in RCFs in both Sweden and internationally.

Acknowledgements

The authors thank all of the first-line managers for their participation.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Funding

This work received funding from The Swedish Research Council for Health, Working Life and Welfare (FORTE) (Grant number 2009-1761).

ORCID

Eva Dahlkvist http://orcid.org/0000-0002-1656-2716
Marita Wallhagen http://orcid.org/0000-0001-8413-3975

References

Aarons, G. A. (2006). Transformational and transactional leadership: Association with attitudes toward evidence-based practice. *Psychiatric Services (Washington, D.C.)*, *57*(8), 1162–1169. https://doi.org/10.1176/ps.2006.57.8.1162

Akner, G. (2009). Analysis of multimorbidity in individual elderly nursing home residents. Development of a multimorbidity matrix. *Archives of Gerontology and Geriatrics*, *49*(3), 413–419. https://doi.org/10.1016/j.archger.2008.12.009

Andersen, J. A., & Hansson, P. H. (2011). At the end of the road? On differences between women and men in leadership behavior. *Leadership & Organization Development Journal*, *32*(5), 428–441. https://doi.org/10.1108/01437731111146550

Andersson, J. E. (2005). *Rooms for the elderly: About architecture for older people with dementia or somatic disease* [Licentiate thesis, Stockholm KTH Royal Institute of Technology]. Stockholm, Sweden. https://www.diva-portal.org/smash/get/diva2:14195/FULLTEXT01.pdf

Arvonen, J. (2002). *Change, production and employees: An integrated model of leadership* [Doctoral dissertation, Stockholm University]. Stockholm, Sweden. https://www.diva-portal.org/smash/record.jsf?pid=diva2%3A1151343&dswid=-6073

Bacigalupo, I., Mayer, F., Lacorte, E., Di Pucchio, A., Marzolini, F., Canevelli, M., Di Fiandra, T., & Vanacore, N. (2018). A systematic review and meta-analysis on the prevalence of dementia in Europe: Estimates from the highest-quality studies adopting the DSM IV diagnostic criteria. *Journal of Alzheimer's Disease: JAD*, *66*(4), 1471–1481. https://content.iospress.com/download/journal-of-alzheimers-disease/jad180416?id=journal-of-alzheimers-disease%2Fjad180416

Berman, M. G., Jonides, J., & Kaplan, S. (2008). The cognitive benefits of interacting with nature. *Psychological Science*, *19*(12), 1207–1212. https://doi.org/10.1111/j.1467-9280.2008.02225.x

Björk, S., Juthberg, C., Lindkvist, M., Wimo, A., Sandman, P. O., Winblad, B., & Edvardsson, D. (2016). Exploring the prevalence and variance of cognitive impairment, pain, neuropsychiatric symptoms and ADL dependency among persons living in nursing homes: A cross-sectional study. *BMC Geriatrics*, *16*, 154–158. https://doi.org/10.1186/s12877-016-0328-9

Brinkmann, S., & Kvale, S. (2018). *Doing interviews*. SAGE Publications. https://uk.sagepub.com/en-gb/eur/doing-interviews/book244549

Burns, N., & Grove, S. K. (2005). *The practice of nursing research: Conduct, critique & utilization*. Elsevier Saunders.

Dahlkvist, E., Engström, M., & Nilsson, A. (2020). Residents' use and perceptions of residential care facility gardens: A behaviour mapping and conversation study. *International Journal of Older People Nursing*, *15*(1), e12283. https://doi.org/10.1111/opn.12283

Dahlkvist, E., Hartig, T., Nilsson, A., Högberg, H., Skovdahl, K., & Engström, M. (2016). Garden greenery and the health of older people in residential care facilities: A multi-level cross-sectional study. *Journal of Advanced Nursing*, *72*(9), 2065–2076. https://doi.org/10.1111/jan.12968

Dahlkvist, E., Nilsson, A., Skovdahl, K., & Engström, M. (2014). Is there a caring perspective in garden/patio design in elderly care?: A description and a comparison of residents' and staff members' perceptions of these outdoor spaces. *Journal of Housing for the Elderly*, *28*(1), 85–106. https://doi.org/10.1080/02763893.2013.858094

Detweiler, M. B., Murphy, P. F., Myers, L. C., & Kim, K. Y. (2008). Does a wander garden influence inappropriate behaviors in dementia residents? *American Journal of Alzheimer's Disease and Other Dementias*, *23*(1), 31–45. https://doi.org/10.1177/1533317507309799

Ekvall, G., & Arvonen, J. (1991). Change-centered leadership: An extension of the two-dimensional model. *Scandinavian Journal of Management*, *7*(1), 17–26. https://doi.org/10.1016/0956-5221(91)90024-U

Elias, S. M. S. (2018). Prevalence of loneliness, anxiety, and depression among older people living in long-term care: A review. *International Journal of Care Scholars*, *1*(1), 39–43. https://journals.iium.edu.my/ijcs/index.php/ijs/article/view/44

Elo, S., & Kyngäs, H. (2008). The qualitative content analysis process. *Journal of Advanced Nursing*, *62*(1), 107–115. https://doi.org/10.1111/j.1365-2648.2007.04569.x

Gonzalez, M. T., & Kirkevold, M. (2015). Clinical use of sensory gardens and outdoor environments in Norwegian nursing homes: A cross-sectional e-mail survey. *Issues in Mental Health Nursing*, *36*(1), 35–43. https://doi.org/10.3109/01612840.2014.932872

Gunawan, J., & Aungsuroch, Y. (2017). Managerial competence of first-line nurse managers: A concept analysis. *International Journal of Nursing Practice*, *23*(1), e12502. https://doi.org/10.1111/ijn.12502

Hagerman, H., Engström, M., Häggström, E., Wadensten, B., & Skytt, B. (2015). Male first-line managers' experiences of the work situation in elderly care: An empowerment perspective. *Journal of Nursing Management*, *23*(6), 695–704. https://doi.org/10.1111/jonm.12197

Hartig, T., Mitchell, R., de Vries, S., & Frumkin, H. (2014). Nature and health. *Annual Review of Public Health*, *35*, 207–228. https://doi.org/10.1146/annurev-publhealth-032013-182443

Hernandez, R. O. (2007). Effects of therapeutic gardens in special care units for people with dementia: Two case studies. *Journal of Housing for the Elderly*, *21*(1–2), 117–152. https://doi.org/10.1300/J081v21n01_07

Holloway, I., & Wheeler, S. (2010). *Qualitative research in nursing and healthcare*. Wiley-Blackwell.

Hoyt, C. L., Simon, S., & Reid, L. (2009). Choosing the best (wo)man for the job: The effects of mortality salience, sex, and gender stereotypes on leader evaluations. *The Leadership Quarterly*, *20*(2), 233–246. https://doi.org/10.1016/j.leaqua.2009.01.016

Josefsson, K., Åling, J., & Östin, B.-L. (2011). What implies the good work for registered nurses in municipal elderly care in Sweden? *Clinical Nursing Research*, *20*(3), 292–309. https://doi.org/10.1177/1054773811403622

Kaluza, A. J., Boer, D., Buengeler, C., & van Dick, R. (2020). Leadership behaviour and leader self-reported well-being: A review, integration and meta-analytic examination. *Work & Stress*, *34*(1), 34–56. https://doi.org/10.1080/02678373.2019.1617369

Karasek, R. A., & Theorell, T. (1990). *Healthy Work: Stress, productivity, and the reconstruction of working life*. Basic Books.

Kearney, A. R., & Winterbottom, D. (2006). Nearby nature and long-term care facility residents: Benefits and design recommendations. *Journal of Housing for the Elderly*, *19*(3–4), 7–28. https://doi.org/10.1300/J081v19n03_02

Kouzes, J. M., & Posner, B. Z. (2003). *The leadership challenge: How to make extraordinary things happen in organizations*. John Wiley.

Kuoppala, J., Lamminpää, A., Liira, J., & Vainio, H. (2008). Leadership, job well-being, and health effects-a systematic review and a meta-analysis. *Journal of Occupational and Environmental Medicine*, *50*(8), 904–915. https://doi.org/10.1097/JOM.0b013e31817e918d

Larsson, J., & Vinberg, S. (2010). Leadership behaviour in successful organisations: Universal or situation-dependent? *Total Quality Management & Business Excellence*, *21*(3), 317–334. https://doi.org/10.1080/14783360903561779

Lee, S. Y., Hung, L., Chaudhury, H., & Morelli, A. (2021). Staff perspectives on the role of physical environment in long-term care facilities in Canada and Sweden. *Dementia*, *20*(7), 2558–2572. https://doi.org/10.1177/14713012211003994

Magnussen, I.-L., Alteren, J., & Bondas, T. (2021). "Human flourishing with dignity": A meta-ethnography of the meaning of gardens for elderly in nursing homes and residential care settings. *Global Qualitative Nursing Research*, *8*, 23333936211035743–23333936211035717. https://doi.org/10.1177/23333936211035743

McCallin, A. M., & Frankson, C. (2010). The role of the charge nurse manager: A descriptive exploratory study. *Journal of Nursing Management*, *18*(3), 319–325. https://doi.org/10.1111/j.1365-2834.2010.01067.x

National Board of Health and Welfare. (2020). *Vård och omsorg om äldre, lägesrapport [Care for the elderly, status report]*. Stockholm.

Nord, C. (2013). Design according to the law: Juridical dimensions of architecture for assisted living in Sweden. *Journal of Housing and the Built Environment*, *28*(1), 147–155. https://doi.org/10.1007/s10901-012-9300-y

Nyberg, A. (2009). *The impact of managerial leadership on stress and health among employees* [Doctoral dissertation, Karolinska Institutet]. Stockholm, Sweden. https://openarchive.ki.se/xmlui/bitstream/handle/10616/38102/thesis.pdf?sequence=1&isAllowed=y

Patton, M. Q. (2015). *Qualitative research & evaluation methods: Integrating theory and practice*. SAGE Publications.

Potter, R., Sheehan, M. D., Cain, R., Griffin, J., & Jennings, P. A. (2018). The impact of the physical environment on depressive symptoms of older residents living in care homes: A mixed Methods Study. *The Gerontologist*, *58*(3), 438–447. https://doi.org/10.1093/geront/gnx041

Powell, G. N. (1990). One more time: Do female and male leaders differ? *Academy of Management Perspectives*, *4*(3), 68–75. https://doi.org/10.5465/ame.1990.4274684

Rappe, E., Kivelä, S. L., & Rita, H. (2006). Visiting outdoor green environments positively impacts self-rated health among older people in long-term care. *HortTechnology*, *16*(1), 55–59. https://doi.org/10.21273/HORTTECH.16.1.0055

Rappe, E., & Topo, P. (2007). Contact with outdoor greenery can support competence among people with dementia. *Journal of Housing for the Elderly*, *21*(3–4), 229–248. https://doi.org/10.1300/J081v21n03_12

Raske, M. (2010). Nursing home quality of life: Study of an enabling garden. *Journal of Gerontological Social Work*, *53*(4), 336–351. https://doi.org/10.1080/01634371003741482

Shu Lin, S., Chau Ming, T., & Clare Cooper, M. (2018). What makes a garden in the elderly care facility well used? *Landscape Research*, *44*(2), 256–259. https://doi.org/10.1080/01426397.2018.1457143

Skakon, J., Nielsen, K., Borg, V., & Guzman, J. (2010). Are leaders' well-being, behaviours and style associated with the affective well-being of their employees?: A systematic review of three decades of research. *Work & Stress*, *24*(2), 107–139. https://doi.org/10.1080/02678373.2010.495262

SOU (2008). *Värdigt liv i äldreomsorg* [Dignified life in elderly care]. Swedish Parliament: Ministry of Health and Social Affairs.

Takai, Y., Yamamoto-Mitani, N., & Ko, A. (2014). Prevalence of and factors related to pain among elderly Japanese residents in long-term healthcare facilities. *Geriatrics & Gerontology International*, *14* (2), 481–489. https://doi.org/10.1111/ggi.12094

Yari, M., Lee, K., Cassidy, J., & Chen, Z. (2021). Transforming space into place: A person-environment interchange approach for designing an assisted living facility courtyard. *Journal of Aging and Environment*, *35*(2), 188–206. https://doi.org/10.1080/26892618.2020.1815923

Yukl, G. (1999). An evaluative essay on current conceptions of effective leadership. *European Journal of Work and Organizational Psychology*, *8*(1), 33–48. https://doi.org/10.1080/135943299398429

Yukl, G. (2009). *Leadership in organizations*. Prentice Hall.