

Leadership and the psychosocial work environment in old age care

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Aims and objectives. To study leadership factors and their associations with psychosocial work environment among nursing assistants who are engaged in old age care and to analyse (i) differences in the assessment of leadership factors and the assessment of psychosocial work environment in nursing homes and home help services and (ii) the association between the psychosocial work environment and factors that are related to leadership in nursing homes and home help services.

Background. Leadership factors are an important element of the psychosocial work environment in old age care. The physical distance between leaders and nursing assistants is larger in home help services than in nursing homes. Therefore, it is important to study leadership separately in nursing homes and home help services.

Design. Assessments from 844 nursing assistants in nursing homes and 288 in home help services (45 nursing homes and 21 home help service units) were analysed.

Methods. The data were analysed using linear regression. Age, gender, number of staff at the unit, number of years at the current working unit and educational level were controlled in Model 1. Summarised indexes that were based on all independent variables except the main independent variable were additionally controlled in Model 2.

Results. Psychosocial work environment was related to leadership factors, but stronger associations occurred more frequently in nursing homes than in home help services. Empowering leadership, support from superiors, the primacy of human resources and control over decisions were associated with higher assessments on all the variables that were related to the psychosocial work environment in both the nursing homes and home help services.

Conclusions. Organisational differences in conducting leadership in old age care must be considered. Some leadership characteristics are better prerequisites for creating and maintaining a positive psychosocial work environment for nursing assistants in nursing homes and home help services.

Implications for practice. Due to the differences in organisational settings, it is important to consider the differences in prerequisites in conducting leadership. To

influence nursing assistants' performance and to increase quality in old age care in the long term, appropriate leadership is necessary.

Key words: leadership, nursing assistants, old age care, staff, supervision, work environment

What does the research add to existing knowledge in gerontology?

- Leaders in old age care play important roles in creating a positive psychosocial work environment in both nursing homes and home help services.
- Leadership is important for old age care, but plays a greater role in the psychosocial work environment of nursing homes than in that of home help services.
- Leaders of home help services have fewer opportunities to organise, structure and immediately address problems than do leaders of nursing homes.

What are the implications of this new knowledge for nursing care with older people?

- Leaders in old age care must recognise their influence on nursing assistants' psychosocial work environments at nursing homes and home help services.
- The organisational settings of nursing homes and home help services differ. This is important for leaders in the field of old age care to consider.

How could the findings be used to influence policy, practice, research or education?

- The organisational settings of nursing homes and home help services differ. It is important to recognise these differences when recruiting leaders who have the appropriate characteristics.
- There is an association between leadership in old age care and nursing assistants' psychosocial work environment, which might affect the quality of care.

Introduction

A healthy work environment is important, not only because it promotes employees' mental and physical well-being but also because individuals who feel good physically and mentally perform well. Therefore, it can be assumed that a positive psychosocial work environment will lead to higher quality in old age care and in other organisations (Abdelrazek *et al.*,

2010). Leaders have a responsibility to create and maintain a positive psychosocial work environment (Malloy & Penprase, 2010). The Swedish National Board of Health and Welfare (2011) notes that good, effective old age care requires knowledgeable leaders who are close to their staff and who support and coach employees in their daily work. However, insufficient attention has been devoted to leadership in the social professions (Lawler, 2007) and to the association between leadership behaviours and job satisfaction in nursing homes and home help services (Moiden, 2003; McGuire & Kennerly, 2006; Harvath *et al.*, 2008). To the best of our knowledge, few studies have examined leadership and psychosocial work environment in different old age care settings (e.g. nursing homes and home help services). Antonsson (2013) has studied managers in old age care. She points out the lack of research about the association between leadership and psychosocial work environment in old age care. Therefore, it is important to increase the understanding of leadership in old age care in different settings, such as nursing homes and home help services.

Leadership and the psychosocial work environment

Various approaches have been used to study leadership. In the current study, the formal leadership of managers who have a direct responsibility for employees, economy and the development of the unit (i.e. first-line managers) will be analysed.

There are positive relationships between leadership and employees' well-being (Loke, 2001; Arnold *et al.*, 2007; Cummings *et al.*, 2010), between leadership and work environment (Dellve *et al.*, 2007; Sellgren *et al.*, 2007) and between leadership, job satisfaction and organisational commitment (Lok & Crawford, 1999, 2001). In a review article about work environment in nursing, Person *et al.* (2007) conclude that some leadership characteristics, attributes and behaviours are associated with positive outcomes in staff and create a positive, healthy work environment. Additionally, Westerberg and Tafvelin (2014) have shown that perceived support from leaders, colleagues and the organisation has positive effects on employees' perceptions of the psychosocial work environment in old age care settings. These relationships imply that leadership factors are an important aspect of

the psychosocial work environment in the field of old age care.

Structural distance: direct and indirect leadership in the municipal care of older people

When studying leadership, it is important to consider structural distance. Avolio *et al.* (2004) define structural distance as 'physical structure in the organisation (e.g. physical distance between leader and follower), organisational structure (e.g. hierarchical level, span of management control and management centralisation) and supervision structure (e.g. frequency of leader–follower interaction)' (p. 954). In contrast to indirect leadership, direct leadership occurs when there is a small physical distance between leaders and their subordinates during the performance of work tasks. The relationship between leaders and subordinates has been studied comprehensively in direct leadership situations. Indirect leadership has not been studied to the same degree as direct leadership (Antonakis & Atwater, 2002; Dvir *et al.*, 2002; Avolio *et al.*, 2004). Howell and Hall-Merenda (1999) report that subordinates under direct leadership show significantly higher performance than those under indirect leadership. According to Howell and Hall-Merenda (1999) and Howell *et al.* (2005), direct leaders enjoy greater opportunities to build relationships, establish personal contact and engage in direct interactions.

The organisational context: the municipal care of older people

In Sweden, old age care is governed at three levels. Firstly, the central government controls policy declarations, legalisations, state subventions and supervision. Secondly, county councils (regional level) are responsible for hospitals and the majority of primary healthcare centres. Thirdly, the local or municipality level is required to provide social services, including home help services and nursing home care for individuals of all ages who need care (Szebehely & Trydegård, 2012).

The municipal social services provide old age care in two contexts, the private home of the older person (home help service) and an institution (i.e. a nursing home). Home help service staff members provide service to older persons in their homes. The intention of this service is to help the older individual to remain in place by providing him or her with assistance in performing personal care and the activities of daily life (ADL). Some basic medical tasks, such as treating wounds and administering prescribed drugs and injections (insulin), can be included (Szebehely & Trydegård, 2012). Home help service staff members generally work alone in

large geographic areas, and the physical distance between the leaders and the staff is vast. Nursing home staff members provide similar social and medical care to older people, but older individuals in nursing homes often have more ADL limitations, disabilities and morbidities and require more advanced care (Ernst *et al.*, 2008). Nursing home staff members work together within a single building and are physically closer to both their leader and their work colleagues than are home help service staff members. These fundamental environmental differences (physical distance and working in nursing homes vs. private homes) play an important role in daily work and are assumed to impact opportunities to engage in leadership in nursing homes and home help services.

Aim

The aim of this study was to examine the perceptions of leadership factors and their associations with psychosocial work environment factors in nursing homes and home help services. The specific research objectives are to analyse the following:

- The differences in assessed leadership factors and psychosocial work environmental factors between nursing homes and home help services,
- The association between subordinates' assessment of their psychosocial work environment and factors related to leadership behaviours in nursing homes and home help services,
- Whether the association between subordinates' assessment of their psychosocial work environment and factors related to leadership behaviours differs between nursing homes and home help services.

Methods

Participants and procedures

This study utilised a cross-sectional design, and its analyses were based on the secondary analyses of a questionnaire that was distributed to all the staff members of a south Sweden municipality. In 2012, the questionnaire for psychological and social factors at work (QPS) was mailed to the leaders of 45 nursing homes and 21 home help service units. The leaders were instructed to deliver one questionnaire to each subordinate. The subordinates were instructed to return their completed questionnaires to their work unit, which then submitted the responses. The leaders had no access to their subordinates' answers. The total sample consisted of 1490 persons ($n = 354$ in home help services and $n = 1136$ in

nursing homes). The total response rate was 78%. The response rate was 74% ($n = 844$) for nursing homes and 81% ($n = 288$) for home help services. Table 1 shows a sample description of the study population.

The sample description (Table 1) shows that most of the respondents were women (91%) and that 74% of the respondents were between 34 and 65 years of age. Most of the sample had an upper secondary or intermediate education level (80%). None of the home help units had more than 35 employees.

Measures/questionnaire

This study used the QPS, which was constructed by the National Institute for Working Life (Lindström *et al.*, 2000) to measure employees' perceptions of the psychosocial work

Table 1 Sample characteristics

	Nursing home ($n = 844$) %	Home help ($n = 288$) %	Total ($n = 1132$) %
Gender			
Men	4	5	4
Women	91	89	91
Missing	5	6	5
Age			
18–24	6	8	6
25–34	13	19	15
35–44	22	23	22
45–54	31	23	29
55–64	24	20	23
>65	1	2	1
Missing	3	5	4
Educational level			
Compulsory	9	12	10
Upper secondary	51	48	50
Intermediate education	30	30	30
University	5	6	6
Missing	5	4	4
Number of employees in the unit			
≤25	42	83	50
26–35	23	17	22
36–45	19	–	16
46–55	12	–	9
>56	4	–	3
Number of years at current unit			
≤2	10	15	12
3–5	18	18	18
6–10	22	25	23
11–15	19	17	18
16–25	19	13	17
>25	8	8	8
Missing	4	4	4

environment in nursing homes and home help services. Each item (see Appendix 1) was rated on a Likert scale that ranged from 1 ('very seldom or never') to 5 ('very often or always'); a higher rating indicates a more positive answer. Table 3 includes descriptions of the indexes and Cronbach's alpha coefficients (α) for subordinates in nursing homes and home help services. In addition to the QPS, the questionnaire included questions regarding gender, age, number of staff in the unit, number of years at current work unit and educational level.

Data analyses

As an initial step, we performed a factor analysis (principal component) with Varimax rotation to study the construct validity of the QPS. We found that the factors obtained from our analyses matched the factors created by Lindström *et al.* (2000). The factors consist of 2–5 items (questions). On the basis of the results of the principal component analyses, we created straightforward summarised indexes. The response scores were summed and divided by the number of items. The indexes had 10–25 unique values. We then examined the distribution of all factors. We found that some of the factors ('control of work pacing', 'support from co-workers', 'social climate', 'perception of group work', 'support from superior', 'perception of mastery' and 'positive challenge at work') were positively skewed and needed to be normalised. We performed a log transformation using the STATA (StataCorp LP, 4905 Lakeway Drive, College Station, Texas 77845-4512, USA) command LNSKEW0 to render the factors non-skewed and then standardised them to range from 1 to 5. Because we also transformed all logged factors by adding a constant before the variables were logged, there is no straightforward interpretation of the beta coefficient except that a positive value means a positive association, and a negative coefficient, a negative association. The coefficients are comparable because all dependent and independent variables were scaled to have the same range. We then performed a linear regression that controlled for gender, age (categorised as 18–24, 25–34, 35–44, 45–54 and 55–64 years), number of staff at the unit (categorised as ≤25, 26–35, 36–45, 46–55 or ≥56), number of years at current work unit (categorised as <2, 2–5, 6–10, 11–15, 16–25 and ≥26 years) and educational level (categorised as compulsory, upper secondary, intermediate and university) (Model 1).

For each of the independent variables in Model 2, we also controlled for a summarised index. This index was based on all other independent variables that addressed perceptions of leadership factors. For example, when the main independent

Dimensions	1	2	3	4	5	6
1. Support from superior	–					
2. Empowering leadership	0.75**	–				
3. Human resource primacy	0.67**	0.63**	–			
4. Control of decisions	0.36**	0.34**	0.37**	–		
5. Control of work pacing	0.20**	0.17**	0.24**	0.53**	–	
6. Role conflict	–0.34**	–0.25**	–0.36**	–0.25**	–0.23**	–
7. Quantitative job demands	–0.23**	–0.19**	–0.25**	–0.24**	–0.33**	0.56**

Table 2 Correlations between independent variables

Pearson's correlations are used.

** $P < 0.01$.

variable was 'support from superior', the summarised index was based on all independent variables that addressed perceptions of leadership factors except 'support from superior'. This procedure was employed due to the high correlations among the independent variables (Table 2). All of the models were run separately for nursing homes and home help services. To test whether the associations differed between nursing homes and home help services, we also ran models that included interaction terms between type of work unit (nursing home vs. home help services) and all other independent variables. Employers within a single work unit may have a tendency to judge their work situation similarly. This might lead to smaller variations within work units than across units (41 nursing homes and 25 home help service units). To control for this possibility, we used cluster-correlated robust estimates of variance (Rogers, 1993). This procedure recalculated the standard errors of observations that correlated within each work unit.

Variables

Dependent variables

For the regression analyses, 'support from co-workers', 'social climate', 'perception of group work', 'perception of mastery' and 'positive challenge at work' were used as outcome variables. These variables were assessed as outcome variables because leaders are less likely to affect these variables than the variables that were employed as independent variables.

Independent variables

We wished to investigate how leadership affects employees' perceptions of their psychosocial work environment in two samples, those working in home help services and those working in nursing homes. We assessed the following dimensions as independent variables: 'quantitative job demands', 'role conflict', 'control of decisions', 'control of

work pacing', 'support from superior', 'empowering leadership' and 'human resource management'. These dimensions were considered as independent variables because they have a strong connection to leader behaviour. Leaders are capable of adjusting these dimensions by changing their behaviour.

Ethical considerations

This study was approved by the Ethical Committee in Jönköping, Sweden (DNR: 2013-3).

Results

Differences between leadership factors and psychological work environment factors

Table 3 summarises the differences among the assessed psychosocial work environment factors in nursing homes and home help services.

There were a few statistically significant differences in the studied variables between nursing and home help services. The nursing home staff assessed 'control of work pacing' ($P < 0.001$), 'support from co-workers' ($P = 0.028$) and 'positive challenge at work' ($P = 0.092$) more positively than did the home help service staff.

Table 4 shows the results of the linear regression analysis of nursing homes and home help services. There were more significant associations between the independent and dependent variables in Model 1 than in Model 2. In general, stronger associations between the independent and dependent variables were found in nursing homes than in home help services. This finding is discussed further below.

High assessments of 'support from superior', 'empowering leadership', 'human resource primacy' and 'control of decisions' were associated with more positive outcomes on all the dependent variables in both nursing homes and home help

Table 3 Leadership factors and psychosocial work factors in nursing homes and home help services

Factors	Number of questions in index	Nursing homes (<i>n</i> = 844)		Home help services (<i>n</i> = 288)		Difference between nursing homes and home help	
		<i>M</i> (SD)	α	<i>M</i> (SD)	α	Diff.	<i>P</i>
Independent (leadership factors)							
Support from superior	3	3.12 (1.08)	0.89	3.23 (0.99)	0.87	-0.11	0.433
Empowering leadership	3	3.10 (1.01)	0.88	3.21 (1.01)	0.88	-0.11	0.299
Human resource primacy	3	2.75 (0.92)	0.77	2.86 (0.85)	0.76	-0.11	0.349
Control of decisions	5	2.77 (0.71)	0.69	2.71 (0.66)	0.72	0.06	0.239
Control of work pacing	4	2.85 (0.87)	0.71	2.42 (0.86)	0.76	0.43	<0.001
Role conflict	3	2.49 (0.82)	0.75	2.43 (0.71)	0.69	0.06	0.453
Quantitative job demands	4	2.82 (0.68)	0.72	2.86 (0.65)	0.76	-0.04	0.658
Dependent (psychosocial work environment factors)							
Support from co-workers	2	3.68 (1.10)	0.89	3.40 (1.10)	0.90	0.28	0.028
Social climate	3	3.72 (0.86)	0.85	3.77 (0.80)	0.79	-0.05	0.794
Perception of group work	3	3.51 (0.99)	0.85	3.48 (0.87)	0.74	0.03	0.758
Perception of mastery	4	3.68 (0.72)	0.77	3.66 (0.65)	0.74	0.02	0.730
Positive challenge at work	3	3.69 (0.83)	0.64	3.57 (0.82)	0.71	0.12	0.092

M, mean; *SD*, standard deviation; Cronbach's alpha coefficients (α).

services. This result indicated that these four leadership factors had an essential effect on the psychosocial work environment in both nursing homes and home help services. Furthermore, 'control of work pacing' demonstrated positive associations with 'social climate' (in nursing homes and home help services), 'perception of group work' (in nursing homes), 'perception of mastery' (in nursing homes and home help services) and 'positive challenge at work' (in nursing homes). The results also showed that a high value of 'quantitative job demands' and 'role conflict' was negatively associated with all the dependent variables in nursing homes. Of note, these negative associations were expected because high values for these variables indicate more negative aspects of work.

In Model 2, when controlling for indexes that were based on all other independent variables, the number of significant associations between the independent and dependent variables were reduced compared to the first model. The results showed that a high value for 'support from superior' had the strongest association with all the dependent variables in both nursing homes and home help services ('perception of group work' and 'positive challenge at work' with $P \leq 0.10$ in home help services). Furthermore, the following associations were found (between the independent and dependent variables):

- 'Empowering leadership' had a positive association with 'support from co-workers' in nursing homes and home help services and with 'positive challenge at work' in nursing homes.

- 'Human resource primacy' had a positive association with 'social climate' in nursing homes and home help services.
- 'Control of decisions' had a positive association with 'perception of group work' in nursing homes and home help services and with 'positive challenge at work' in nursing homes.
- 'Role conflict' had a negative association with all independent variables in nursing homes and with 'perception of mastery' in home help services.
- 'Quantitative job demands' had a negative association with 'perception of mastery' and with 'positive challenge at work' in nursing homes.

In some cases, the association between the leadership factors and psychosocial work factors differed significantly between nursing homes and home help services. For all the dependent variables, the associations between 'role conflicts' and 'quantitative job demands' were stronger in nursing homes than in home help services.

Significant differences between nursing homes and home help services were found for the following associations:

- 'Empowering leadership' and 'perception of group work' ($P < 0.10$ in Model 2) (this is the only case in which the association was stronger in home help services),
- 'Role conflict' and 'support from co-workers' ($P \leq 0.10$ in Model 1),
- 'Role conflict' and 'social climate' ($P < 0.05$ in Model 1, $P < 0.10$ in Model 2),
- 'Role conflict' and 'perceptions of group work' ($P < 0.05$ in models 1 and 2),

Table 4 Association between leadership factors and psychosocial work factors in nursing homes and home help services

Dependent variables → Independent variables	Support from co-workers		Social climate		Perception of group work		Perception of mastery		Positive challenge at work	
	NH	HH	NH	HH	NH	HH	NH	HH	NH	HH
	β (P)	β (P)	β (P)	β (P)						
Support from superior										
Model 1	0.23 (<0.001)	0.28 (<0.001)	0.36 (<0.001)	0.30 (<0.001)	0.26 (<0.001)	0.28 (<0.001)	0.23 (<0.001)	0.29 (<0.001)	0.24 (<0.001)	0.27 (<0.001)
Model 2	0.16 (<0.001)	0.23 (<0.001)	0.20 (<0.001)	0.16 (0.027)	0.11 (0.033)	0.14 (0.094)	0.11 (0.001)	0.16 (0.008)	0.10 (0.028)	0.13 (0.064)
Empowering leadership										
Model 1	0.20 (<0.001)	0.23 (<0.001)	0.25 (<0.001)	0.27 (<0.001)	0.18 (<0.001)	0.32 (<0.001)	0.20 (<0.001)	0.25 (<0.001)	0.23 (<0.001)	0.23 (<0.001)
Model 2	0.08 (0.046)	0.14 (0.031)	0.01 (0.829)	0.07 (0.414)	0.00 (0.952) [†]	0.15 (0.054)	0.03 (0.284)	0.10 (0.066)	0.08 (0.044)	0.09 (0.161)
Human resource primacy										
Model 1	0.23 (<0.001)	0.22 (0.010)	0.39 (<0.001)	0.38 (<0.001)	0.29 (<0.001)	0.21 (0.025)	0.23 (<0.001)	0.18 (0.002)	0.27 (<0.001)	0.25 (<0.001)
Model 2	0.06 (0.141)	0.08 (0.324)	0.18 (0.008)	0.19 (0.034)	0.08 (0.172)	0.02 (0.861)	0.00 (0.886)	-0.04 (0.364)	0.08 (0.060)	0.07 (0.265)
Control of decisions										
Model 1	0.21 (<0.001)	0.25 (0.017)	0.33 (<0.001)	0.35 (<0.001)	0.35 (<0.001)	0.44 (<0.001)	0.25 (<0.001)	0.28 (<0.001)	0.38 (<0.001)	0.35 (<0.001)
Model 2	0.05 (0.311)	0.10 (0.236)	0.07 (0.129)	0.08 (0.274)	0.18 (0.013)	0.26 (0.003)	0.06 (0.160)	0.05 (0.446)	0.23 (<0.001)	0.17 (0.080)
Control of work pacing										
Model 1	0.08 (0.061)	0.07 (0.268)	0.21 (<0.001)	0.13 (0.042)	0.18 (<0.001)	0.06 (0.467)	0.16 (<0.001)	0.10 (0.042)	0.13 (<0.001)	0.02 (0.744)
Model 2	-0.05 (0.144)	-0.06 (0.362)	0.02 (0.596)	-0.05 (0.375)	0.02 (0.690)	-0.09 (0.239)	0.01 (0.681)	-0.04 (0.312)	-0.02 (0.538)	-0.13 (0.051)
Role conflict[‡]										
Model 1	-0.28 (<0.001) [†]	-0.07 (0.534)	-0.42 (<0.001) [*]	-0.23 (0.007)	-0.37 (<0.001) [*]	-0.10 (0.284)	-0.33 (<0.001)	-0.24 (<0.001)	-0.28 (<0.001) [*]	-0.08 (0.260)
Model 2	-0.15 (0.004)	0.04 (0.686)	-0.23 (<0.001) [†]	-0.06 (0.419)	-0.23 (<0.001) [*]	0.03 (0.705)	-0.20 (<0.001)	-0.13 (0.024)	-0.13 (0.002) [*]	0.05 (0.450)
Quantitative job demands[‡]										
Model 1	-0.22 (<0.001)	-0.00 (0.986)	-0.33 (<0.001)	-0.14 (0.069)	-0.31 (<0.001)	0.02 (0.902)	-0.35 (<0.001) [*]	-0.14 (0.135)	-0.31 (<0.001) [*]	-0.05 (0.635)
Model 2	-0.05 (0.318) [†]	0.15 (0.156)	-0.08 (0.251)	0.08 (0.423)	-0.10 (0.081) [*]	0.20 (0.059)	-0.19 (<0.001) [*]	0.01 (0.877)	-0.13 (<0.001) [*]	0.12 (0.129)

Note: Bold values indicate that the associations differ significantly between nursing homes and home help services.

The results are from linear regressions. Nursing homes (NH) and home help services (HH). Model 1 is controlled for age (divided into the categories of 18–24, 25–34, 35–44, 45–54 and 55–64 years), sex, the number of staff in the unit (divided into categories <2.5, 2.6–3.5, 4.6–5.5 and >5.6), the number of years at the current working unit (divided into categories <2, 2–5, 6–10, 11–15, 16–25 and >25 years) and educational level. Each of the independent variables in Model 2 is controlled for a summarised index that is based on all other independent variables except the main independent variable.

**P < 0.01, *P < 0.05, †P < 0.10; P-value for difference between nursing homes and home help services.

‡For these independent variables, a higher value indicates a more negative response.

- 'Role conflict' and 'positive challenge at work' ($P < 0.05$ in models 1 and 2),
- 'Quantitative job demands' and 'perception of mastery' ($P < 0.05$ in models 1 and 2), and
- 'Quantitative job demands' and 'positive challenge at work' ($P < 0.05$ in Model 1, $P < 0.01$ in Model 2).

Discussion

To the best of our knowledge, few studies have examined leadership and psychosocial work environment factors in different old age care settings (e.g. nursing homes and home help services). Therefore, it is essential to gain a greater understanding of how leadership factors affect job satisfaction in different old age care settings to identify the leadership characteristics that are adapted to different organisational prerequisites.

We analysed the differences in the assessed leadership factors and psychosocial work environmental factors between nursing homes and home help services. The results indicated a few significant differences between nursing homes and home help services. Differences were found between the two settings with respect to 'control of work pacing', 'support from co-workers' and 'positive challenge at work'. All these variables were higher in nursing homes. The difference in the leadership factors 'control of work pacing' and 'positive challenge at work' might be due to the smaller degree of interaction between leaders and subordinates in home help services. Physical distance between leaders and subordinates reduces the opportunity for leaders to supervise, organise and optimise nursing assistants' work situations, which may have negative effects in the field of home help services. It is possible that the absence of the opportunity for subordinates to collaborate in the home help service context has an impact on the significant differences with respect to 'support from co-workers'. These results suggest that nursing assistants in nursing homes might have better prerequisites for 'support from co-workers' and 'control of work pacing' and that they experience more 'positive challenges at work' than do workers in home help services. The current results support the findings of Howell and Hall-Merenda (1999) and Howell *et al.* (2005), who found that direct leaders have greater opportunities to build relationships, establish personal contact and engage in direct interaction.

We also analysed the association between subordinates' assessment of their psychosocial work environment and factors related to leadership behaviours in nursing homes and home help services. In general, more associations were significant in nursing homes. These patterns suggest that direct leadership in nursing homes plays a greater role in the

psychological work environment than does the indirect leadership in home help services.

In the current study, the leadership behaviours (i.e. 'support from superior', 'empowering leadership', 'human resource primacy' and 'control of decisions') played an important role in nursing assistants' assessments of their psychosocial work environment in both nursing homes and home help services. Nursing assistants who assessed these leadership factors as high also reported a better psychosocial work environment. These findings are consistent with several studies (e.g. Loke, 2001; Arnold *et al.*, 2007; Bishop *et al.*, 2008, 2009; Cummings *et al.*, 2010) that demonstrated that a good relationship between nursing assistants and leaders can increase job satisfaction. Although the difference decreased when we controlled for indexes that were based on all other independent variables, these variables tended to have a great impact on the psychosocial work environment. Therefore, these factors seem to be equally important in the two organisational contexts in old age care (e.g. nursing homes and home help services). These results are consistent with previous reports on leadership in old age care that found that leadership plays an important role in nursing assistants' experience of their psychosocial work environment.

The leadership factors 'role conflict' and 'quantitative job demands' were significantly associated with nearly all the psychological work environment factors in nursing homes. This result may suggest that these leadership factors have negative associations with all the studied aspects of the work environment in nursing homes. According to Howell *et al.* (2005), leadership is more visible in nursing homes than in home help services. The current results indicated that the lack of a clear exposure to leadership in home help services might explain the differences. Due to physical distance, nursing assistants do not have the prerequisites for interaction with leaders in the home help services. Furthermore, the leaders in home help services might not have the same opportunity as the leaders in nursing homes to organise, structure and immediately address problems.

In general, the current results showed that the leaders in nursing homes and home help services require, in some cases, different approaches to achieve and maintain a positive psychosocial work environment for the nursing assistants. Bishop *et al.* (2008) and Chou *et al.* (2003) note that leadership impacts quality in old age care and that management is related to residents' well-being (Barry *et al.*, 2005). Therefore, nursing assistants' experience of their psychosocial work environment may affect the quality of old age care. Because nursing assistants are the staff members who most frequently interact with the care recipients, it is important for

old age care providers to consider how their psychosocial work environment affects the residents' perceived quality of care in different organisational contexts of old age care.

Limitations

This study's limitations include its cross-sectional design and the fact that the subjects were selected from a single municipality in southern Sweden. The characteristics of the sample may impact the generalisability of the results, as we do not know whether other municipalities share these characteristics. The non-response rate was 22%. The selection bias caused by non-response may have affected the results.

Conclusion

The results demonstrate that leadership factors are associated with nursing assistants' psychosocial work environment. Thus, the leaders in old age care must recognise their influence on the nursing assistants' psychosocial work environment. To create a good psychosocial work environment in the old age care setting, the leaders must focus on 'support from superior', 'empowering leadership', 'human resource primacy' and 'control of decisions'. Leaders in old age care should focus on providing support and on listening to and expressing appreciation for achievements by the staff ('support from superior'). They should encourage staff to participate and to speak up and should help staff develop their skills ('empowering leadership'). Furthermore, old age care will benefit if the management of the organisation shows interest in the well-being of the personnel, if the personnel are well taken care of, if the workplace leaders reward staff for a job well done ('human resource primacy') and if the workplace leaders give staff the opportunity to have influence at the workplace. Examples of such influence include contact with clients and persons the staff needs to collaborate with and involvement in decisions about alternative methods for doing the job ('control of decisions'). To influence nursing assistants' performance and to increase quality in old age care in the long term, appropriate leadership is necessary. Thus, there are advantages and disadvantages to conducting leadership in nursing homes and home help services. In nursing homes, it is essential for leaders to reduce 'role conflicts' and 'quantitative job demands'. Due to the differences in organisational settings, it is important to consider the differences in prerequisites in conducting leadership (e.g. direct vs. distant). By recognising the differences in contextual structures and recruiting leaders with the characteristics that are desirable for the specific context, there is a greater potential for

creating a positive psychosocial work environment in old age care in nursing homes and home help services.

Implications for practice

- To create a good psychosocial work environment in old age care setting, the leaders must focus on 'support from superior', 'empowering leadership', 'human resource primacy' and 'control of decisions'.
- If changes in psychosocial work environment are to take place, leaders need to involve nursing assistants' to get a better understanding of changes that needs be done in the different organisational settings.

Conflict of interest

No conflict of interest has been declared by the authors.

Contributions

Study design: DL, IK; data collection: DL; analysis: DL, IK and manuscript preparation: DL, ME-B, IK..

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Appendix 1

Item and index description

Independent

Quantitative job demands (20 unique values)

Is your work load irregular such that the work piles up?

Do you have to work overtime?

Is it necessary to work at a rapid pace?

Do you have too much to do?

Role conflict (15 unique values)

Do you have to do things that you feel should be done differently?

Are you given assignments without adequate resources to complete them?

Do you receive incompatible requests from two or more people?

Control of decisions (25 unique values)

If there are alternative methods for doing your work, can you choose which method to use?

Can you influence the amount of work that is assigned to you?

Can you influence decisions concerning the persons with whom you will need to collaborate?

Can you decide when to be in contact with clients?

Can you influence decisions that are important for your work?

Control of work pacing (20 unique values)

Can you set your own work place?

Can you decide when you are going to take a break?

Can you decide the length of your break?

Can you set your own working hours (flex-time)?

Support from superior (15 unique values)

If needed, can you obtain support and help with your work from your immediate superior?

If needed, is your immediate superior willing to listen to your work-related problems?

Are your work achievements appreciated by your immediate superior?

Appendix 1. (Continued)

Empowering leadership (15 unique values)
Does your immediate superior encourage you to participate in important decisions?
Does your immediate superior encourage you to speak up when you have different opinions?
Does your immediate superior help you develop your skills?
Human resource primacy (15 unique values)
At your organisation, are you rewarded (money, encouragement) for a job well done?
Are workers well cared for in your organisation?
To what extent is the management of your organisation interested in the health and well-being of its personnel?
Dependent
Support from co-workers (10 unique values)
If needed, can you obtain support and help with your work from your co-workers?
If needed, are your co-workers willing to listen to your work-related problems?

Appendix 1. (Continued)

Social climate (15 unique values)
Encouraging and supportive
Distrustful and suspicious
Relaxed and comfortable
Perception of group work (15 unique values)
Do you appreciate belonging to this group or team?
Is your group or team work flexible?
Is your group or team successful at problem-solving?
Perception of mastery (20 unique values)
Are you content with the quality of the work that you do?
Are you content with the amount of work that you get done?
Are you content with your ability to solve problems at work?
Are you content with your ability to maintain a good relationship with your co-workers at work?
Positive challenge at work (15 unique values)
Are your skills and knowledge useful in your work?
Is your work challenging in a positive way?
Do you consider your work to be meaningful?
