


The Impact of Leadership and Psychosocial Work Environment on Recipient Satisfaction in Nursing Homes and Home Care

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Abstract

This study examines the association between nursing assistants' assessment of leadership, their psychosocial work environment, and satisfaction among older people receiving care in nursing homes and home care. Cross-sectional surveys were conducted with nursing assistants ($n = 1,132$) and people receiving care ($n = 1,535$) in 45 nursing homes and 21 home care units. Direct leadership was associated with the psychosocial work environment in nursing homes and home care. Furthermore, better leadership was related to higher satisfaction among nursing assistants and older people in nursing homes. Thus, indirect leadership had no effect on recipients' satisfaction in either nursing homes or home care. The path analysis showed an indirect effect between leadership factors and recipient satisfaction. The findings suggest that the psychosocial work environment of nursing assistants and recipient satisfaction in nursing homes can be increased by improving leadership.

Keywords

satisfaction with care, nursing assistants, nursing homes, home care

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Introduction

Perceived support from an organization, leaders, and colleagues has positive effects on staffs' perception of the psychosocial work environment in the care for older adults (Westerberg & Tafvelin, 2014). In addition, Pearson et al. (2007) have shown that some leadership characteristics or attributes and behaviors are associated with a healthy work environment. Research has also shown that there is a positive relationship between leadership and psychosocial work environment (Dellve, Skagert, & Vilhelmsson, 2007; Lundgren, Ernsth Bravell, & Kåreholt, 2015; Sellgren, Ekvall, & Tomson, 2007) and between leadership and staffs' well-being (Arnold, Turner, Barling, Kelloway, & McKee, 2007; Cummings et al., 2010). Lundgren, Ernsth Bravell, & Kåreholt (2015) have also shown that there are stronger associations between leadership and the psychosocial work environment in nursing homes than in home care.

In Sweden, a nationwide recipient satisfaction survey on care for older adults showed that recipient satisfaction was based on interpersonal aspects (e.g., influence, respect, and information) of care (Kajonius & Kazemi, 2016). These interpersonal aspects are, according to Bishop et al. (2008), important due to their indirect effects on nursing assistants. Westerberg, Hjelte, and Josefsson

(2017) have noted that influence does not have an effect on recipient satisfaction in home care because recipients do not believe they are included in the decision-making process about their care. Regarding different aspects of the psychosocial work environment, more role conflict and exhaustion and less job satisfaction have been associated with low recipient satisfaction (Tzeng, Ketefian, & Redman, 2002). Furthermore, older people in nursing homes rated care satisfaction lower than did those receiving care in home care (Karlsson, Edberg, Jakobsson, & Hallberg, 2013). This result is consistent with the study of Lundgren, Ernsth Bravell, Börjesson, and Kåreholt (2018), who also found more significant associations between psychosocial work environment and recipient satisfaction in nursing homes than in home care. In fact, the study also showed that the psychosocial work environment factors of

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social climate (e.g., encouraging and supportive) and positive challenge at work (e.g., if the work is challenging in a positive way, and if your skills and knowledge is useful in your work) had a greater effect on recipient satisfaction in nursing homes than in home care. A higher level of employee work satisfaction demonstrates a significant positive relationship with recipient satisfaction in both nursing homes and home care (Chou, Boldy, & Lee, 2003; Hasson & Arnetz, 2011; Sikorska-Simmons, 2006).

Differences Between and Similarities in Nursing Homes and Home Care

The Swedish municipal social services are organized in basically two different contexts where older persons receive care; home care (in the private home of the older person) and nursing homes (in institutions). In Sweden, it is recommended by the National Board of Health and Welfare (2011) that first-line managers have a higher education (university) degree (e.g., Bachelor/Master in Nursing, Social Work, or Human Relations). The professional training to become a nursing assistant (in home care and in nursing homes) in Sweden is 3 years of secondary school for students, most often between 16 and 19 years old. Persons older than 19 years are able to study to become a nursing assistant. Persons with an earlier exam from upper secondary school or intermediate education can validate subjects by checking their previous credentials. Then, the training is approximately 1.5 years, and the supplemental education focuses on health and social care (Swedish National Agency for Education, 2011).

Registered nurses (RNs) in Sweden, who have a 3-year higher education (university) and the main responsibility of the nursing, can delegate some medical tasks to nursing assistants. In these cases, the RN is responsible for determining that nursing assistants have the right prerequisites to perform the delegated tasks and have the responsibility for how they perform the delegated work tasks (National Board of Health and Welfare, 1997, 2017). Nursing assistants in home care help with activities such as facilitating activities of daily living (ADL), treating wounds, administering prescribed drugs and injections (insulin), and performing personal care in the private homes of the older person (Szebehely & Trydegard, 2012; Westerberg et al., 2017). The assistance varies in both in the content and the amount of the service, and the work done by nursing assistants greatly varies. For example, there can be a quick visit to comprehensive health and social care of older adults with multiple chronic diagnoses to address a large number of the different service needs of older persons (Hjalmarsson, Norman, & Trydegård, 2004). Nursing assistants work alone in large geographic areas, and the physical distance between them and their first-line managers is generally large.

Older people in nursing homes often have more ADL limitations, require more advanced care, and have more morbidities than older people receiving home care (Ernst Bravell, Berg, & Malmberg, 2008). Thus, similar

medical and social care is provided to older individuals by nursing assistants in nursing homes. Staff in nursing homes work together within a single building and are physically closer to their work colleagues, their first-line manager, and the older people in need of health care and services than staff in home help services. The physical distance/proximity and setting (working in nursing homes versus home care) play an important role in nursing assistants' daily work.

Theoretical Framework

Several studies imply that leadership factors are associated with the psychosocial work environment and that there are associations between the psychosocial work environment and care recipient satisfaction. However, it is unclear how these aspects are interrelated. To evaluate this, Donabedian's (1988) model is used to conceptualize and evaluate care quality in nursing homes and home care. The Donabedian's model provides a structure for care evaluation and is often used to conceptualize and assess care quality in health care settings (Hearld, Alexander, Fraser, & Jiang, 2008; Hillmer, Wodchis, Gill, Anderson, & Rochon, 2005). The model has three interacting components: structure–process–outcome. Structure includes the characteristics of the institution (e.g., facilities, size, human resources, and type of staffing). Process refers to how the care is carried out, and it includes all activities in the care process. Outcome includes all results of care, which includes care recipient perception of satisfaction with care. A good structure increases the possibility to good processes, and good processes increases the possibility to good outcomes (Donabedian, 1988).

In this article, structure refers to the different physical structures (nursing homes and home care). Process refers to interactions between older people and care providers, for example, how care is carried out and what is done for and to the recipient. Outcome refers to the results of care, that is, what happens to the recipient, and in this article, how satisfied the care recipients are with the care. By asking care recipients about different aspects of their interpersonal relationships, one can obtain information about the recipients' satisfaction with care. Even if Donabedian's model is well known when examining quality, it is limited in its recognition of interactions between system components (structure, process, and outcome) that might affect care (Carayon et al., 2006). For example, the process might be influenced by organizational characteristics, and the care of older adults may involve different locations and, therefore, various physical environments. These variations might affect the need for different collaboration and coordination among the care providers involved in the process (Carayon et al., 2006).

The present study analyzes associations between leadership, psychosocial work environment, and recipient satisfaction in nursing home and home care

according to Donabedian's conceptualization of quality of care (structure, process, and outcome). The *structural variables* were operationalized as nursing home versus home care, and leadership behaviors as the organizational prerequisites for conducting care. *Process* was operationalized as the interplay between psychosocial work environment and recipients, for example, the interaction between nursing assistants and the recipients, and *outcome* was operationalized as recipient satisfaction, that is, recipients' assessments on different questions regarding how satisfied they are with the interaction between the service provider and the older person.

Design and Methods

Participants and Procedures

This study used a cross-sectional design, and the analyses were based on two validated questionnaires that were distributed to all nursing assistants and to all persons aged ≥ 65 years who received care in a middle-sized municipality in the south of Sweden. The questionnaires were mailed to 45 nursing homes and 21 home care units in 2012. To remove the impact from mixed settings in the analysis, nursing homes and home care units that were located in the same facility were excluded ($n = 4$). First-line managers were instructed to provide one questionnaire to each nursing assistant (the Questionnaire for Psychosocial and Social Factors at Work, QPS; Lindström et al., 2000) and one questionnaire (a Recipient Satisfaction Questionnaire, RSQ) to each older person who received care and/or services. Nursing assistants were instructed to return their completed questionnaires (QPS) to their work unit in an anonymized envelope. Older persons were instructed to return their completed questionnaires (RSQ) in a prepaid envelope. If the older person was incapable of answering the questionnaire, he or she could complete the survey with assistance from a relative or an acquaintance (proxy interviews). These questionnaires were returned the same way in the anonymized prepaid envelope that was provided to each older person. To maintain confidentiality, the responses to both the QPS and RSQ were then submitted to an external organization for data entry.

Measures/Questionnaire

This study used two questionnaires:

- (A) The QPS (Lindström et al., 2000) was used to measure nursing assistants' perceptions of leadership factors and psychosocial work environment in nursing homes and home care. Nursing assistants have assessed both leadership factors and their own psychosocial work environment. The QPS consisted of a total of 41 items (questions) divided into three factors ("direct leadership," "indirect leadership," and "psychosocial work environment"). Direct leadership consisted of the

following three dimensions: support from superior, empowering leadership, and human resource primacy. Indirect leadership consisted of the following four dimensions: control of decision, control of work pacing, quantitative job demands, and role conflicts. Psychosocial work environment consisted of the following five dimensions: support from co-workers, social climate, perception of group work, perception of mastery, and positive challenge at work. Each of these dimensions consisted of two to five items. Totally, each factor (direct and indirect leadership and psychosocial work environment) consisted of nine to 16 items, and Cronbach's alpha coefficients varied from $\alpha = .70$ to $.87$ (see Table 2). Each item was rated on a Likert-type scale that ranged from 1 (*very seldom or never*) to 5 (*very often or always*).

- (B) The RSQ consisted of two separate surveys: one for home care (32 items) and one for nursing homes (35 items). In this study, six items were consistent across both surveys and provided the comparison data between the nursing home and home care. The items were as follows: (a) To what extent do you feel that you are involved in decisions made regarding your situation? ("Participation in decision making"); (b) How do you assess your opportunities to contact social care staff? ("Contact with staff"); (c) To what extent do you feel that your individual needs are taken into consideration? ("Consideration"); (d) To what extent do you feel that the social service staff show you respect? ("Respect"); (e) To what extent do you feel that the social service staff show interest in you and your situation? ("Interest"); and (f) To what extent do you feel confident in your social care staff? ("Trust in staff"). For the home care survey, each item was rated on a Likert-type scale that ranged from 1 (*very seldom or never*) to 5 (*very often or always*); for the nursing home survey, each item was rated on a Likert-type scale that ranged from 1 to 6, with higher numbers indicating more positive answers. These items constituted the recipient satisfaction index ($\alpha = .90$) in this study.

Questions regarding sex, age, number of staff in the unit, number of years at the current work unit, and educational level were included in the QPS; sex, age, marital status, respondent or proxy, and perceived health were included in the RSQ. Both questionnaires had variables indicating organizational setting (e.g., nursing homes and home care) and unit.

Data Analyses

Based on the structure of the QPS (Lindström et al., 2000), straightforward summary indexes were created

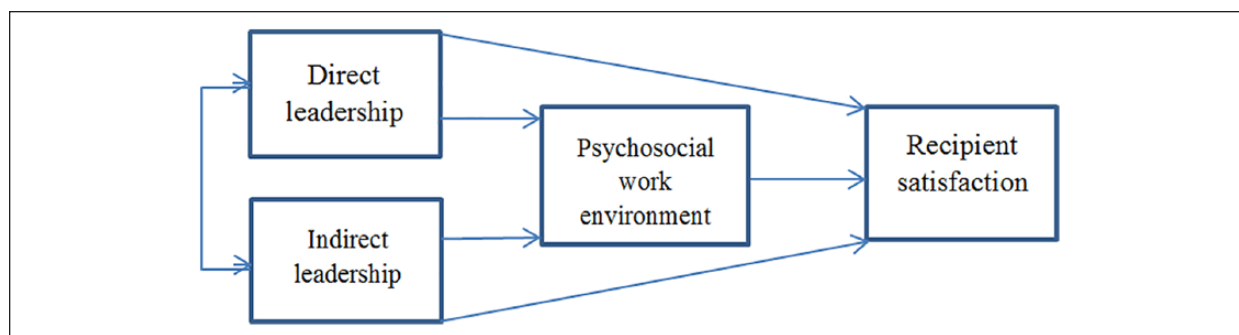


Figure 1. Hypothesized path model for nursing homes and home care.

for each factor. The response scores were summed and divided by the number of items.

The hypothesized model (Figure 1) was tested using path analysis in Stata version 14 software (StataCorp, 2015), with full information maximum likelihood (FIML) estimation. The dimensions included in the factor “direct leadership” that was approximately normally distributed. The distribution of all other dimensions in QPS was positively skewed. All items measuring care recipient satisfaction were negatively skewed. All the skewed dimensions from QPS and all items from care recipient survey had to be normalized. To ensure normal distribution, zero skewness \ln transformation using the Stata command `LNSKEW0` was performed to generate nonskewed variables. Each variable was standardized to range from 1 to 5 (QPS) and 0 to 5 (RSQ). With the zero skewness in transformation, a constant was added before the \ln transformation. There was no straightforward interpretation of the beta coefficient except that a positive value indicated a positive association and a negative coefficient indicated a negative association. To simultaneously demonstrate both direct and indirect effects between independent and dependent variables in nursing homes and home care, path analysis was used (hypothesized model, Figure 1). Standardized coefficient estimates and direct and indirect effects with significant levels for relationships are shown in Figures 2 and 3, and Table 3.

Cluster-correlated robust estimates of variance were used on the unit level (Rogers, 1993). To evaluate fit of the model, standardized root mean squared residual (SRMR) and coefficient of determination (CD) were used. Using cluster-correlated robust estimates of variance on the unit level, it is possible to evaluate the model fit only by using SRMR and CD (StataCorp, 2015).

Variables associated with the care recipients and with the work unit were controlled. The care recipient factors included sex, age (linear representation), marital status, perceived health, and direct or proxy interview. Factors associated with nursing assistants included sex, age (categorized as 18-24, 25-34, 35-44, 45-54, and 55-64 years), number of staff at the unit (≤ 25 , 26-35, 36-45, 46-55, or ≥ 56), number of years at current work unit (< 22 , 5, 6-10, 11-15, 16-25, and > 26), and educational level (compulsory, upper secondary, intermediate, and university). The first models (e.g., nursing home and

home care) controlled for all variables. One control variable at a time was then successively excluded (separately for nursing home and home help) starting with the variable with the highest p value. This process continued until all control variables had a p value $< .05$. With this procedure, only control variables that had a significant effect on the models remained. Standardized coefficient estimates with significant levels for relationships are shown in Figures 2 and 3 and Table 3.

Ethics

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

Results

For the QPS, the total sample consisted of 1,486 nursing assistants ($n = 354$ in home care and $n = 1,132$ in nursing homes). The total response rate was 76%. For nursing homes, the response rate was 75% ($n = 844$), and for home care, 81% ($n = 288$). The RSQ was distributed to 2,802 persons ($n = 1,267$ in nursing homes and $n = 1,535$ in home care). The total response rate was 55%. The response rate was 52% ($n = 655$) for nursing homes and 57% ($n = 880$) for home help services. Table 1 shows a description of the study sample.

The present (Table 1) sample is equivalent to the population in Sweden. In fact, 92% of nursing assistants were women, 76% were between 30 and 59 years old, and 85% had an upper secondary or intermediate level of education in the Swedish population.

Table 2 includes descriptions of the number of items in index, means, Cronbach’s alpha, and p values for the differences between nursing homes and home help care according to employees’ (QPS) and to the older individuals’ (RSQ) assessments of recipient satisfaction in nursing homes and home help care. Questions regarding sex, age, number of staff in the unit, number of years at the current work unit, and educational level were included in the QPS; sex, age, marital status, respondent or proxy, and perceived health were included in the RSQ. Both questionnaires had variables indicating organizational setting (e.g., nursing homes and home care) and unit.

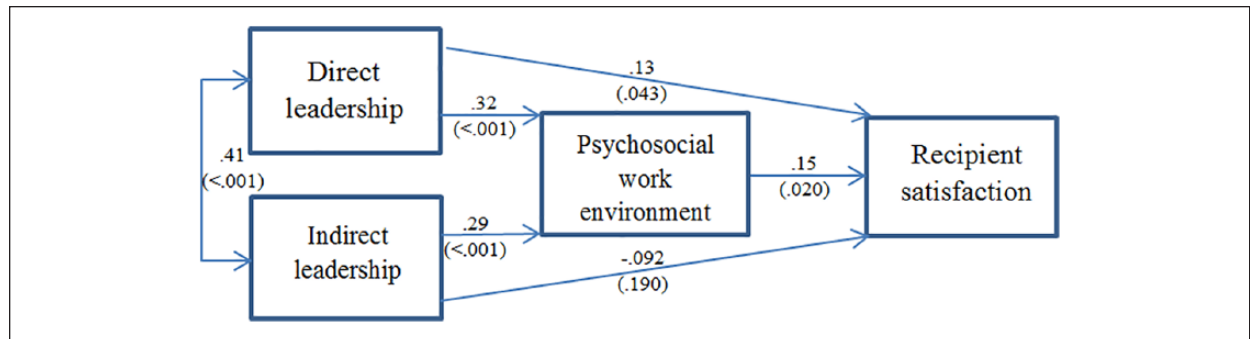


Figure 2. Path model of factors influencing recipient satisfaction in nursing homes.

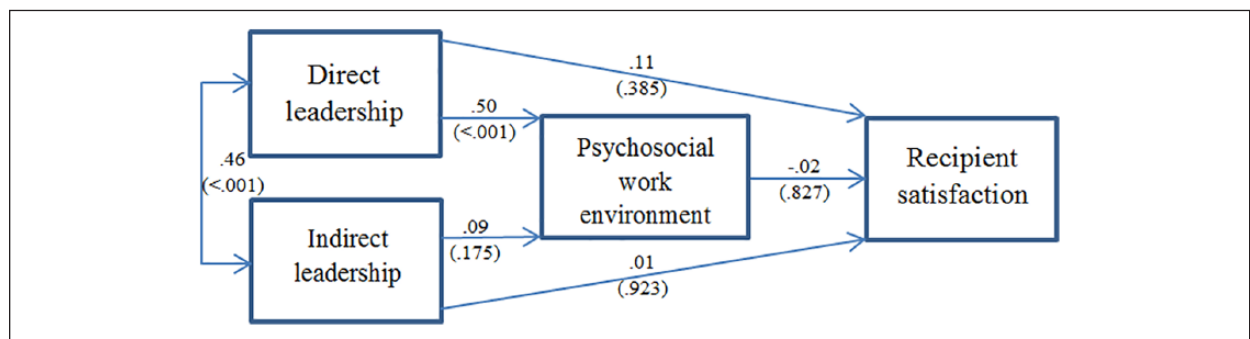


Figure 3. Path model of factors influencing recipient satisfaction in home care.

Nursing assistants' assessments of their first-line managers' leadership and their psychosocial work environment showed one significant difference between nursing homes and home care (indirect leadership). The mean indicated that nursing assistants in nursing homes perceived greater indirect leadership than did nursing assistants in home care. In addition, recipient satisfaction in care for older adults was assessed significantly higher in home care compared with nursing homes.

Table 3 summarizes the associations between assessed direct and indirect leadership, psychosocial work environment, and recipient satisfaction in nursing homes and home care. The model fit measure as SRMR and CD was acceptable both for nursing homes (SRMR = .043, CD = .316) and home care (SRMR = .042, CD = .401). Note that the model fit is affected by the control variables included.

Figure 2 shows the result of the path model of nursing homes. In nursing homes, direct leadership ($p \leq .001$) and indirect leadership ($p \leq .001$) showed significant associations with psychosocial work environment. Thus, only direct leadership had a significant relationship with recipient satisfaction ($p = .043$). Significant associations were found between psychosocial work environment and recipient satisfaction ($p = .020$). High assessment of both leadership factors was associated with positive outcomes for the psychosocial work environment in nursing homes. Furthermore, the results showed indirect effects between direct leadership and recipient satisfaction ($p = .046$) and between indirect leadership ($p = .015$). This result indicated that these two

leadership factors might have an effect on recipient satisfaction, but it is mediated by nursing assistants' psychosocial work environment.

Figure 3 shows the results from the path model of home care. Direct leadership showed a significant association with psychosocial work environment ($p \leq .001$). High assessment of direct leadership was associated with positive outcomes for the psychosocial work environment in home care. None of the other associations were significant, and there were no significant indirect effects between direct leadership and indirect leadership and recipient satisfaction.

Discussion

In the present study, we examined the association between nursing assistants' perceptions of leadership and psychosocial work environment and recipient satisfaction among older people receiving care in different care settings (e.g., nursing homes and home care). To our knowledge, this is the first study that simultaneously analyzes direct effects between leadership, psychosocial work environment, and recipient satisfaction in nursing homes and home care, and indirect effects between leadership and recipient satisfaction. Our results suggest that nursing assistants of psychosocial work environment may mediate effects of leadership on care recipients' satisfaction. Previous studies have found associations between leadership and psychosocial work environment (Cummings et al., 2010; Dellve et al., 2007; Lundgren et al., 2015; Sellgren et al.,

Table 1. Sample Characteristics.

| Nursing assistants | Nursing home (n = 844) | Home care (n = 288) | Diff. between nursing home and home care | Total (n = 1,132) |
|--|---------------------------|------------------------|---|----------------------|
| Psychosocial work environment (QPS) | % | % | <i>p</i> ^a | % |
| Sex | | | | |
| Male | 4 | 5 | Ns | 4 |
| Female | 91 | 89 | Ns | 91 |
| Missing | 5 | 6 | ns | 5 |
| Age (years) | | | | |
| 18-24 | 6 | 8 | ns | 6 |
| 25-34 | 13 | 19 | * | 15 |
| 35-44 | 22 | 23 | ns | 22 |
| 45-54 | 31 | 23 | ** | 29 |
| 55-64 | 24 | 20 | ns | 23 |
| >65 | 1 | 2 | ns | 1 |
| Missing | 3 | 5 | ns | 4 |
| Educational level | | | | |
| Compulsory | 9 | 12 | ns | 10 |
| Upper secondary | 51 | 48 | ns | 50 |
| Intermediate education | 30 | 30 | ns | 30 |
| University | 5 | 6 | ns | 6 |
| Missing | 5 | 4 | ns | 4 |
| Number of employees at the unit | | | | |
| ≤25 | 42 | 83 | ns | 50 |
| 26-35 | 23 | 17 | ns | 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 | ns | 18 |
| 6-10 | 22 | 25 | ns | 23 |
| 11-15 | 19 | 17 | ns | 18 |
| 16-25 | 19 | 13 | * | 17 |
| >25 | 8 | 8 | ns | 8 |
| Missing | 4 | 4 | ns | 4 |
| Older people receiving care from the municipality | Nursing home (n = 655) | Home help (n = 880) | | Total (n = 1,535) |
| Recipient satisfaction (RSQ) | % | % | <i>P</i> | % |
| Sex | | | | |
| Male | 31 | 28 | ns | 30 |
| Female | 63 | 66 | ns | 64 |
| Missing | 6 | 6 | ns | 6 |
| Marital status | | | | |
| Married | 19 | 22 | ns | 21 |
| Widow/widower | 54 | 51 | ns | 52 |
| Divorced | 8 | 11 | ns | 10 |
| Unmarried | 12 | 11 | ns | 11 |
| Missing | 7 | 5 | ns | 6 |
| Age | | | | |
| Mean age | 84 | 82 | * ^b | 83 |

Note. QPS = Questionnaire for Psychosocial and Social; ns = not significant; RSQ = Recipient Satisfaction Questionnaire.

^aBased on χ^2 tests and Fisher's exact test with expected frequencies <5.

^b< .05, t-test.

p* < .05. *p* < .01. ****p* < .001. ns *p* ≥ .05.

Table 2. Leadership, Psychosocial Work Environment Factors and Recipient Satisfaction Items in Nursing Homes and Home Care.

| Factors | Number of questions in index | Nursing homes | | Home care | | <i>p</i> values for the difference between nursing homes and home care | Cronbach's α coefficients |
|---|------------------------------|----------------|----------------|----------------|----------------|--|----------------------------------|
| | | <i>n</i> = 844 | <i>n</i> = 288 | <i>n</i> = 655 | <i>n</i> = 880 | | |
| Indexes of leadership and psychosocial work environment | | <i>M</i> | <i>M</i> | | | | |
| Direct leadership | 9 | 3.00 | 3.10 | | | .105 | .87 |
| Indirect leadership | 16 | 2.73 | 2.59 | | | .000 | .70 |
| Psychosocial work environment | 15 | 3.57 | 3.51 | | | .219 | .78 |
| Index of recipient satisfaction | | <i>M</i> | <i>M</i> | | | | |
| Recipient satisfaction | 7 | 4.74 | 4.94 | | | .000 | .90 |

Note. The *p* values are based on binary logistic regression with nursing homes/home care as the dependent variable. The figures presented are based on nontransformed values (leadership, psychosocial work environment = 1-5, and recipient satisfaction = 1-6).

Table 3. Regression Weights to Test the Hypotheses.

| Hypothesized path | Nursing homes | | Home care | |
|--|---------------|-----------------|-----------|-----------------|
| | β | <i>p</i> | β | <i>p</i> |
| Direct effects | | | | |
| Direct leadership > psychosocial work environment | .32 | <.001 | .50 | <.001 |
| Direct leadership > recipient satisfaction | .13 | .043 | .11 | .385 |
| Indirect leadership > psychosocial work environment | .29 | <.001 | .09 | .175 |
| Indirect leadership > recipient satisfaction | -.09 | .190 | .01 | .923 |
| Psychosocial work environment > recipient satisfaction | .15 | .020 | -.02 | .827 |
| Indirect effects | | | | |
| Direct leadership > recipient satisfaction | .07 | .046 | -.01 | .823 |
| Indirect leadership > recipient satisfaction | .08 | .015 | -.00 | .828 |
| Results of model fit | SRMR | CD | SRMR | CD |
| | .043 | .316 | .042 | .401 |

Note. Bold values indicate significant associations. The models controlled for sex ($p = .019$), age (category: 18-24 years, $p = .003$), and number of employees at unit (category: 46-55, $p = .029$) in nursing homes. For home care, the model controlled for number of years at current unit (category: ≤ 2 , $p = .007$; 3-5, $p = .018$; 16-25, $p = .044$; and > 25 , $p \leq .000$), and education level (category: intermediate education, $p \leq .000$) SRMR = standardized root mean squared residual; CD = coefficient of determination.

2007; Westerberg & Tafvelin, 2014) and between psychosocial work environment and recipient satisfaction (Bishop et al., 2008; Kajonius & Kazemi, 2016; Lundgren et al., 2018).

Furthermore, the findings indicate that the hypothesized model was more effective in predicting the associations in nursing homes compared with home care. This means that most relationships predicted in the hypothesis were confirmed in nursing homes. In contrast, none of the associations (direct or indirect) were significant in home care except the association between direct leadership and the psychosocial work environment. To improve the psychosocial work environment and care recipient satisfaction in nursing homes, direct effects was found when leaders focus on empowering leadership, give support, and show interest in nursing assistants well-being (direct leadership). According to our results, in home care, direct leadership improved nursing assistants psychosocial work environment but not recipient satisfaction.

These results are in line with previous studies; better leadership creates a better psychosocial work environment (Lundgren et al., 2015), and a better psychosocial work environment generates better recipient satisfaction in nursing homes (Lundgren et al., 2018). Previous research has also shown that leadership and psychosocial work environment have less impact on recipient satisfaction in home care compared with in nursing homes (Lundgren et al., 2018; Westerberg et al., 2017). Only one significant association was found in home care (between direct leadership and psychosocial work environment). One explanation for the remaining nonsignificant results might be how home care is organized. In home care, leaders and their staff have their offices located in different accommodations. This makes it difficult for leaders to interact with staff on a daily basis. It is also common for some staff member (with extra responsibility for the unit, that is, as a planner) to plan, structure, and organize the daily work at the unit. It is possible that the planner, informally or implicitly, takes

responsibility for the first-line manager's responsibility over indirect leadership (control of work pacing, quantitative job demands, control of decisions, and role conflicts) in the work unit. In this case, the planner becomes a leader without any formal responsibility for personnel, budget, or development of the unit. This is not the case in nursing homes, where the first-line manager is placed at the nursing home and has the responsibility to plan, structure, and organize work and to manage the personnel, budget or development of the unit.

The Donabedian's (1988) model has been criticized for the lack of interactions between system components, for example, how system components like organizational structures and their characteristics influence the care process (Carayon et al., 2006). In the present study, it seems that the different organizational characteristics that differ between nursing homes and home help influence the possibility for leaders to interact with nursing assistants and for nursing assistants to interact with older people in need of care. There are physical differences between the two settings. The results illustrate the importance of differentiated analyses in nursing homes and home care. This is not a problem with Donabedian's model itself, provided that we do not claim that these two settings are similar and accept their organizational differences. However, it highlights the diversity in the care of older adults and that nursing homes and home care needs to focus on different improvements.

The older adults were selected from a single municipality in southern Sweden, and the study used a cross-sectional design; these factors can be considered a limitation. In addition, when using a cross-sectional design, causal effects cannot be established. The characteristics of the samples may affect the generalizability of the results. Although the structural assumptions are largely the same, we do not know whether other municipalities share these characteristics. Selection bias due to nonresponse may also have affected the results. However, this study included several different measures of leadership, psychosocial work environment, and recipient satisfaction from a large sample, thus providing a clear picture of the associations of nursing assistants' psychosocial work environment with recipient satisfaction. Another limitation is that we have not explored the random effects introduced by having different home care units and nursing homes.

In conclusion, the results showed indirect effects between leadership and recipient satisfaction in nursing homes but not in home care. The absence of an association in home care might be explained by the lack of continuous interaction between first-line managers, staff, and older people in need of care services. The current organization in home care makes it difficult to organize this setting from a leader, psychosocial, and recipient perspective.

Ethical Approval

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

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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