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Work environment and person-centred dementia care in nursing homes—A cross-sectional study

Johanna E. R. Rutten Msc[1,2] | Ramona Backhaus PhD[1,2] | Frans Tan PhD[3] | Marleen Prins MSc[4] | Henriette van der Roest PhD[4] | Ceciel Heijkants MSc[4] | Jan P. H. Hamers Professor[1,2] | Hilde Verbeek Professor[1,2]

[1]Department of Health Services Research, Care and Public Health Research Institute, Maastricht University, Maastricht, The Netherlands

[2]Living Lab in Ageing and Long-Term Care, Maastricht, The Netherlands

[3]Department of Methodology and Statistics, CAPHRI School for Public Health and Primary Care, Maastricht University, Maastricht, The Netherlands

[4]Department on Aging, Netherlands Institute of Mental Health and Addiction (Trimbos-institute), Utrecht, The Netherlands

Correspondence
Johanna E. R. Rutten, Department of Health Services Research, Care and Public Health Research Institute, Maastricht University, Maastricht, The Netherlands.
Email: johanna.rutten@maastrichtuniversity.nl

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Abstract

Aim: This study aims to explore the relationship between work environment, job characteristics and person-centred care for people with dementia in nursing homes.

Background: Person-centred care approaches have become a dominant indicator for good quality of care in nursing homes. Little is known about the relationship between work environment, job characteristics and person-centred care in nursing homes.

Method(s): Cross-sectional data from the LAD study were used. Direct care staff ($n = 552$) of nursing homes ($n = 49$) filled an online questionnaire about work environment characteristics and person-centred care. To examine relationships, multilevel linear regression analyses were conducted.

Results: Associations were found between a higher transformational leadership style, less social support from a leader, a higher unity in philosophy of care, higher levels of work satisfaction, more development opportunities, better experienced teamwork and staff-reported person-centred care.

Conclusion(s): In a complex nursing home environment, person-centred care is influenced by organisational and work characteristics, shared values and interpersonal relationships.

Implications for Nursing: Leaders may consider facilitating collaboration and creating unity between care staff, clients and family members in order to provide person-centred care. Therefore, a transformational leadership style, educational programmes and coaching for leaders are recommended.

KEYWORDS

job characteristics, nursing homes, person-centred care, transformational leadership, work environment

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1 | INTRODUCTION

Continuously improving quality of care for nursing home residents is challenging for health care organisations. Therefore, improving and measuring the quality of care in nursing homes have been the focus of numerous studies in the past years (Castle & Ferguson, 2010; Heffels et al., 2020; Sion et al., 2019). One factor influencing the quality of care in the nursing home setting is the direct care staff.

The relationship between direct care staffing and quality of care has been investigated in several studies (Backhaus et al., 2014; White et al., 2019). For care staff, characteristics of their work environment and their work processes, such as good communication and coordination, are associated with the quality of care in nursing homes (Colon-Emeric et al., 2013; Schwendimann et al., 2014; Temkin-Greener et al., 2009). The model of Backhaus et al. (2017) suggests that work environment characteristics might mediate the relationship between staffing levels and quality of care. In this context, quality of care is mostly linked to clinical outcomes. Nevertheless, quality of care has been defined by more than clinical outcomes in the past years (Hanefeld et al., 2017; Sion et al., 2019).

In dementia care, which represents a large part of all nursing home care, a person-centred approach has become a dominant indicator for high quality of care in the past years (Edvardsson et al., 2008; McCormack, 2004; Simmons & Rahman, 2014). In 1997, Tom Kitwood introduced the concept of person-centred care, which means care is not organised around the disease but rather around the person. By putting the person at the centre of care, positive effects on well-being and reduced health issues are expected (Edvardsson et al., 2008; Kitwood, 1997; McCormack, 2004; McGilton et al., 2012).

The increasing importance of person-centred care as a quality indicator for dementia care requests the investigation of factors influencing person-centred care in nursing homes. Earlier studies have identified several work environment characteristics, such as leadership, as determinants for person-centred care (Backman et al., 2016; Dewar et al., 2019; Willemse et al., 2015). Recently, transformational leadership has become the desired leadership style in nursing (Lynch et al., 2018; Seljemo et al., 2020). The Box 1 provides more insight into transformational leadership.

Moreover, other work environment factors seem to play a crucial role in facilitating person-centred care in nursing homes. Environmental factors, such as positive team climate and work culture, have been associated with better quality of care (Backhaus et al., 2017; Schwendimann et al., 2014). A cross-sectional study by Van Beek and Gerritsen (2010) found that work environment factors are vital to provide individualized quality of care. Therefore, factors such as teamwork might also be associated with person-centred care. An earlier study demonstrated that effective teamwork results in more time to offer residents individualized care (Bowers et al., 2000). Based on this evidence, the work environment seems to play a crucial role for the delivery of person-centred care.

BOX 1 Characteristics of transformational leadership

Transformational leadership:

- Can be described as a type of relational leadership in which staff is motivated to achieve organisational goals and has trust and respect for the leader (Bass & Avolio, 1994);

Transformational leaders:

- Are described as warm and charismatic, with a personal authority that can create change through non-hierarchical teamwork (Miles & Asbridge, 2014);
- In contrast to hierarchical leaders, are more likely to recognize individual care staff preferences;
- Seem to have a positive effect on the well-being of clients (Nielsen et al., 2008; Weberg, 2010) and improve client outcomes in nursing homes (Wong & Cummings, 2007);
- Play an important role in promoting a clear philosophy of care to obtain professional development for direct care staff and person-centred dementia care (Rokstad et al., 2015).

Comprehensive theoretical models integrating work environment characteristics and their relationship with person-centred care are scarce. Since person-centred care became an important indicator for quality of care, it seems evident to investigate the relationship between work environment factors and person-centred care in nursing homes. In this study, the relationship between work environment characteristics (i.e. transformational leadership, teamwork, unity in philosophy of care), job characteristics (i.e. work conditions, satisfaction, social support, task variation and opportunities, autonomy and organisational commitment) and staff-reported level of person-centred care for people with dementia in nursing homes will be assessed.

2 | METHOD

In this study, data from 'Living Arrangements for people with Dementia (LAD)'-study database. The LAD study is a cross-sectional study into quality in a broad scope of dementia care environments in the Netherlands (Prins et al., 2019). Every two to three years this study is conducted, using questions related to different topics. We used data from 2016 to 2017 as these were the newest data, providing specific information on the topic of leadership and person-centred care.

2.1 | Sample

In October 2015, the Trimbos Institute invited 1,728 nursing homes from 363 different health care organisations, listed by the

Dutch Ministry of Health, Welfare and Sport, by mail to participate in the monitoring (Prins et al., 2019). In this study, data of a subsample were used, consisting of direct care staff (e.g. registered nurses, [certified] nurse assistants) working on a unit for people with dementia. Care staff in training were excluded (Prins et al., 2019).

2.2 | Data collection

All data were extracted from the LAD-study database. Participants received an informational letter with login information for the online questionnaire (Prins et al., 2019). Care staff working at wards for people with dementia were asked to complete an online questionnaire. To assess the relationship, data on work characteristics, level of transformational leadership, level of teamwork, unity in philosophy of care and level of person-centred care were extracted from the database. Table 1 presents the used variables and the measurement instruments. The level of person-centred care is based on how staff members perceive the care to be person-centred.

2.3 | Data analysis

Data analyses were performed with SPSS for Windows (version 24). First, sample characteristics, such as distribution and missing data, were explored. In order to prevent bias, 37 respondents who did not fill in most of the questions in the questionnaire were excluded from the original sample ($n = 589$). The remaining missing data ($n = 68$) in the new sample were imputed using multiple imputation techniques. To examine the relationship between work environment characteristics, such as transformational leadership, level of teamwork, job characteristics (independent variables) and staff-reported level of person-centred care (dependent variable), multilevel linear regression analyses (random intercept) were conducted, in which staff (level 1) was nested in nursing homes (level 2). We conducted a fully adjusted analysis in which we controlled for background characteristics (i.e. age of staff and role) and applied a significance level of 0.05. As most respondents were female (96%), we did not include the gender of staff as a covariate.

Intraclass correlation coefficients (ICCs) were calculated to test the correlation between staff members working in the same nursing home. With a value of 0.7, the ICC is considered to be moderate (Koo & Li, 2016). The variance inflation factors (VIFs) were calculated for

TABLE 1 Study variables and their measurement

	Variable	Measurement
Demographic variables	Age	Age in years
	Gender	Male/female
	Role	Clustered in 3 categories according to educational level and role (registered nurse, certified nurse assistant, nurse assistant)
Work environment	Social support from colleagues Social support from leader Autonomy Work conditions Work Satisfaction Task variations and opportunities Organisational commitment	Dutch version of The Leiden Quality of Work Questionnaire (LQWQ; van der Doef & Maes, 1999) 4-point Likert scale (1: totally disagree to 4: totally agree); 30 items The subscales ‘social support from colleagues’, ‘social support from leader’ and ‘autonomy’ consisted of 4 items The subscales ‘work conditions’, ‘task variation & opportunities’ and ‘organizational commitment’ consisted of 5 items The subscale ‘work satisfaction’ consisted of 3 items For each subscale, an average score was calculated per respondent
	Transformational leadership	Global Transformational Leadership Scale (GTL; Carless et al., 2000); 5-point Likert scale (1: rarely or none of the time to 5: (almost) all of the time); 7 items Per respondent, an average score was calculated
	Teamwork	11 statements have been developed by researchers of the Trimbos-institute based on theory about teamwork from Vroemen (1995). The statements contain topics as: open communication, mutual respect, flexible adjustment and showing initiative 4-point Likert scale (1: totally disagree to 4: totally agree) Per respondent, an average score was calculated
	Unity in philosophy of care	Questionnaire developed based on previous findings of the LAD study (Smit et al., 2017). Statements contain subjects linked to philosophy of care such as challenging behaviour, responding to the individual needs of the client and communication with the family carers (Trimbos Instituut, 2010); 5-point Likert scale (1: none of the time to 5: all of the time); 7 items Per respondent, an average score was calculated
Staff-reported person-centred care	Person-centred care	Dutch version of the Person-Centered Care Questionnaire (PCC) (Porock & Chang, 2013); 5-point scale (1: never to 5: always); 34 items Per respondent, an average score was calculated

all independent variables to test for multicollinearity. All values for the calculated VIFs were below 5, which indicates that no multicollinearity problem existed (García et al., 2015). A moderator analysis was conducted to test for the moderating effect of transformational leadership.

2.4 | Ethical considerations

All data were extracted from an existing database. The Medical Ethics Committee of the University Medical Center of Utrecht confirmed that the LAD study does not come under the scope of Medical Research Involving Human Subjects Act (reference number WAG/om/13/055932; Prins et al., 2019).

3 | RESULTS

3.1 | Descriptive statistics

A total of 49 nursing homes from 13 different elderly care organisations participated in the fourth measurement round of the LAD study. These are 3% of the invited nursing homes and 4% of the invited elderly care organisations. In total, 552 staff members from the 49 nursing homes (on average 11 per nursing home, ranging from 2 to 28 per nursing home) completed the online questionnaire, a 36% response rate. Of the 552 respondents, 67% were certified nurse assistants, 22% were nurse assistants, and 10% were registered nurses. Sample characteristics are described in Table 2. Results of the descriptive statistics are reported in Table 3.

TABLE 2 Characteristics of the sample ($n = 552$)

Characteristics of participants		
Age (years) *m* (±*SD*)		44.7 (±12.4)
	Gender *n* (%)	
Male		22 (4%)
Female		530 (96%)
	Function *n* (%)	
	Registered nurse	55 (10%)
	Certified nurse assistant	371 (67%)
	Nurse assistant	126 (23%)

3.2 | Factors influencing person-centred care in nursing homes

Results of the multilevel analysis are reported in Table 4. A more transformational leadership style and a lower level of social support from the leader were significantly related to higher staff-reported person-centred care ($p \leq .001$ and $p \leq .05$, respectively). In addition, higher unity in philosophy of care ($p \leq .05$), higher levels of work satisfaction ($p \leq .001$) of direct care staff, more task variation and opportunities ($p \leq .05$) and better experienced teamwork ($p \leq .05$) were significantly related to higher staff-reported person-centred care. Furthermore, the covariate nursing assistant was significantly related to person-centred care ($p \leq .05$), meaning that compared to registered nurses, nurse assistants indicated that less person-centred care was provided. Work conditions, social support from colleagues and organisational commitment were not significantly related to staff-reported person-centred care. Due to the significance level of .05, autonomy ($p \geq .05$) was considered non-significant, although the value of .054 was critical. The moderator analysis revealed that transformational leadership might have a moderating effect on the relationship between work conditions, autonomy, social support from the leader, organisational commitment, and higher unity in philosophy of care and staff-reported person-centred care.

TABLE 3 Characteristics of study variables

	m(±*SD*)	Score range (minimum and maximum)	*n*
Work conditions[a]	2.6 (±0.5)	1.2–4.0	552
Autonomy[a]	2.9 (±0.4)	1.3–4.0	552
Social support leader[a]	3.0 (±0.6)	1.0–4.0	552
Social support colleagues[a]	3.2 (±0.5)	1.3–4.0	552
Work satisfaction[a]	3.0 (±0.6)	1.3–4.0	552
Task variation and opportunities[a]	2.8 (±0.4)	1.4–4.0	552
Organisational commitment[a]	2.9 (±0.5)	1.0–4.0	552
Teamwork[a]	3.0 (±0.4)	1.2–4.0	549
Transformational leadership[b]	3.3 (±0.9)	1.0–5.0	529
Unity in philosophy of care[b]	3.5 (±0.9)	1.0–5.0	529
Person-centred care[c]	3.0 (±0.4)	2.0–3.9	533

[a]Scale range 1: totally disagree to 4: totally agree.

[b]Scale range 1: rarely or none of the time to 5: (almost) all of the time.

[c]Scale range 1: never to 5: always.

TABLE 4 Factors influencing person-centred care in nursing homes

	B	*SE*	*p*-value
Work conditions	−0.038013	0.031476	.227
Autonomy	0.074740	0.038798	.054
Social support leader	−0.095797	0.030113	.001
Social support colleagues	−0.056112	0.034930	.108
Work satisfaction	0.126806	0.033051	.000**
Task variation and opportunities	0.100758	0.037321	.007
Organisational commitment	0.043237	0.034472	.210
Teamwork	0.123065	0.044665	.006
Transformational leadership	0.090501	0.017093	.000**
Unity in philosophy of care	0.045732	0.014141	.001
Certified nurse assistant	−0.014456	0.041851	.730
Nurse assistant	−0.097823	0.047358	.039
Age	0.001728	0.000996	.083

Note: Dependent variable: staff-reported person-centred care.

$p < .05$ is considered significant.

**Statistical significance $p < .001$.

4 | DISCUSSION

In this study, the association between work environment, job characteristics and staff-perceived person centeredness in nursing homes for people with dementia was assessed. Results indicated that work environment characteristics (i.e. transformational leadership, unity in philosophy of care, teamwork and three job characteristics [social support from leader, work satisfaction and task variation and development opportunities]) are associated with staff-reported person-centred care. Contrary to our expectations, no statistical associations were found for other job characteristics (work conditions, social support from colleagues, autonomy and organisational commitment) and staff-reported person-centred care.

The positive impact of leadership on person-centred care practices has been investigated earlier (Backman et al., 2016, 2020). The positive association between leaders who follow a more transformational leadership style and staff-reported person-centred care can be explained by attitudes that are embodied by a transformational leader (see Box 1). In the literature, four components of transformational leadership are described that could be relevant to explain this association: idealized influence, individual consideration, inspirational motivation and intellectual stimulation (Barbuto, 2005; Bass, 1995; Hall et al., 2002). A transformational leader who acts as a role model (idealized influence) experiences less resistance from staff towards change (Wang, 2011) and is likely capable of implementing interventions more easily, including those aimed at person-centred care. In addition, it has been reported that care staff has a desire to deliver person-centred care (Edvardsson et al., 2011; Simard & Volicer, 2020). By empowering care staff through individual consideration and inspirational motivation, a transformational leader can facilitate this preferred way of working.

Moreover, our results indicate that more unity in philosophy of care is associated with higher person-centred care. This is in line with earlier studies pointing out that communicating goals and visions are crucial for achieving high quality of care (Lynch et al., 2018; McCormack et al., 2012; Scalzi et al., 2006; Stolee et al., 2005).

Another result of our study is that teamwork is associated with person-centred care. By enabling shared decision-making, positive and effective staff relationships have been found to be important in providing person-centred care in prior studies (Carvajal et al., 2019; Efstathiou & Clifford, 2011). Other studies highlight teamwork as a key facilitator for providing person-centred care (Abbott et al., 2016; Oppert et al., 2018). The nature of care tasks requires partnership and teamwork among caregivers (Eldh et al., 2016). Furthermore, effective teamwork provides more free time for caregivers to deliver person-centred care (Oppert et al., 2018).

Higher task variation and opportunities, as well as work satisfaction, were also associated with staff-reported person-centred care. When care staff feels empowered and confident, they are more likely to work according to the wishes and needs of residents and experience more job satisfaction (Bishop et al., 2008; Squires et al., 2015). Prior studies also investigated the effect of person-centred care on job satisfaction among direct care staff. These studies show that a higher degree of person-centred care contributes to higher work satisfaction among nurses (Edvardsson et al., 2011; Rajamohan et al., 2019; Sjögren et al., 2015).

Our results show that less social support from a leader is associated with more staff-reported person-centred care. This could be explained by the assumption that teams who already perform more independently and provide high levels of person-centred care need less support from their leader. The theory of Tuckman and Jensen (1977) suggests that groups who reached the fourth out of five development stages within a group forming process perform more independently and need less or even no support from a leader to reach a common goal. The association between social support from

a leader, team performance and staff-reported person-centred care should be investigated more closely.

In our sample, the majority of participants were certified nurse assistants, followed by nurse assistants. This is a typical configuration for the Dutch long-term care setting, where vocationally trained or baccalaureate-educated registered nurses make up the lowest percentage of direct care staff (Buljac-Samardzic et al., 2016; van der Windt & Talma, 2005). In the Netherlands, certified nurse assistants follow a 2- to 3-year vocational training (Huls et al., 2015). Nurse assistants are less educated and follow a 2-year educational programme (Willemse et al., 2014). Our findings show a negative association between nurse assistants and staff-reported person-centred care, as nurse assistants indicated that less person-centred care was provided. This could be due to a discrepancy of educational programmes trying to enhance person-centred care. Overall, educational programmes, such as training on the job, are aimed at staff from diverse occupations and educational levels (Hunter et al., 2016). Up to now, there is little evidence for long-term maintenance of knowledge gained by those training programmes (Aylward et al., 2003). Nurse assistants even report getting most of their knowledge through work-related experiences (Eraut, 2000; Hunter et al., 2016; Ozsoy & Ardahan, 2008). Furthermore, it has been reported that educational programmes for nurse assistants in the Netherlands are not focused enough on providing person-centred care in elderly individuals (Hamers et al., 2012). This discrepancy between educational programmes and actual knowledge gained in practice could explain a negative association between nurse assistants and provision of person-centred care. Further research is needed to investigate the relationship between the educational level of direct care staff and the provision of person-centred care in the nursing home setting.

Several limitations should be taken into account. Due to the cross-sectional design, we were only able to investigate associations and no cause–effect relationships. Therefore, our findings should be interpreted with care. A potential weakness may be that staff-reported person-centred care was measured on the basis of individual perceptions about their own performance and is therefore subjective. Additionally, it has been suggested that care staff are biased to give socially or politically correct answers about person-centred care (Willemse et al., 2015).

5 | CONCLUSIONS

This study has highlighted that transformational leadership, unity in philosophy of care, teamwork and three job characteristics (social support from leader, work satisfaction and task variation and development opportunities) are associated with staff-reported person-centred care. Future longitudinal studies could provide more insight into these relationships. Person-centred care could be improved by generating more evidence on the cause–effect relationships of work environment characteristics and person-centred care. Additionally, future research may investigate which components of transformational leadership are associated with more person-centred care behaviour in care staff. To facilitate person-centred care in nursing homes, it seems beneficial to train leaders to follow a more transformational leadership style.

6 | IMPLICATIONS FOR NURSING MANAGEMENT

The results highlight that in a complex environment such as a nursing home, a diversity of factors is associated with the desirable client outcome of person-centred care. Within the nursing home, relationships and collaboration play an important role. To achieve unity in philosophy of care and shared values, a collaboration between leaders, care staff, clients and family members is recommended. Leaders may consider facilitating collaboration by frequent evaluation, implementing teambuilding interventions (e.g. coaching) to strengthen teamwork within care teams and active involvement of clients and family members.

To effectively fulfil these tasks, leaders may use a transformational leadership style. They could consider follow educational programmes to learn about facets and characteristics of a transformational leadership style and could take part in learning communities to reflect on actions and their effect. This may enable them to balance interests of all parties involved in the nursing home, to work in a relationship-centred way and to facilitate person-centred care.

CONFLICT OF INTEREST

None to declare.

ETHICAL APPROVAL

The Medical Ethics Committee of the University Medical Center of Utrecht confirmed that the Living Arrangements for people with Dementia study does not come under the scope of Medical Research Involving Human Subjects Act (reference number WAG/om/13/055932).

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the Trimbos Institute upon request.

ORCID

Johanna E. R. Rutten https://orcid.org/0000-0003-1575-9821
Ramona Backhaus https://orcid.org/0000-0002-0817-9872

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