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# Person-Centered care Practices in Nursing Homes: Staff Perceptions and the Organizational Environment

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## Person-centered care practices in nursing homes: Staff perceptions and the organizational environment

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## ABSTRACT

Person-centered care (PCC) is considered the standard to assure quality of care and quality of life in long-term care, benefiting both residents and staff. This study examines the associations between nursing home staff perceptions of person-centered care practices, the organizational system, and work-related attitudes in a sample of 340 nurses and direct care workers across 32 nursing homes in Oregon. Random-intercepts regression models were used to estimate within- and between-nursing home variation in staff perceptions of PCC practices as measured by the Staff Assessment of Person-Directed Care (SA-PDC), and identify characteristics associated with these perceptions. Staff in nursing homes that accept Medicaid reported lower SA-PDC scores, and higher scores were reported in nonprofit nursing homes. Staff perceptions varied extensively within nursing homes, suggesting a lack of staff cohesion regarding core aspects of PCC. Cultivating a supportive work environment is key to promoting person-centered care practices, increasing job satisfaction, elevating affective commitment, and reducing turnover intention.

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## Introduction

Decades of practice and research point to person-centered care (PCC) as the gold standard in long-term care.<sup>1</sup> These practices emphasize placing the person at the center of planning and care rather than having organizational or staffing needs driving care decisions.<sup>2</sup> PCC requires nursing staff and others to get to know a person well and to recognize and respect their personhood, or individuality and worth.<sup>3,4</sup> Other key features of PCC include personalizing care to meet individual preferences, needs, and values;<sup>5,6</sup> supporting autonomy, including the ability to pursue activity meaningful to the person;<sup>7–10</sup> and nurturing relationships, both between staff and residents and between residents and people who are important to them.<sup>11,12</sup> Finally, staff must perform PCC practices within a welcoming and supportive environment.<sup>13,14</sup>

PCC is positively associated with residents' quality of life, quality of care, and satisfaction.<sup>15–20</sup> Like residents, nursing home (NH) direct care staff experience several benefits working in an organizational environment that supports PCC practices, including greater job

satisfaction, retention, work effectiveness, and the ability to thrive at work.<sup>16,17,21–28</sup> Implementing PCC practices depends on staff who routinely interact with residents and provide direct care, which include licensed (eg, registered nurses, licensed professional nurses) and unlicensed staff or direct care workers. In the United States, NH direct care workers predominantly identify as women, less than half as non-Hispanic White (43%), followed by Black/African American (37%), Hispanic Latino (12%), and Asian American/Pacific Islander (4%), and 36% live below the poverty level.<sup>29</sup> Most staff-resident interactions consist of direct care.<sup>30</sup> In NHs certified nursing assistants comprise most unlicensed staff and provide the bulk of hands-on resident care, an estimated 2.1 h of direct care per resident per day compared to 0.8 h for licensed professional nurses and 0.4 h for registered nurses.<sup>29</sup> Certified nursing assistants, therefore, have the greatest opportunity to know nursing home residents as individuals, one of the core principles of PCC.

Alongside staff, several organizational factors influence quality of care and service delivery. Donabedian's Structure-Process-Outcome framework provides a systematic way to examine these factors.<sup>31,32</sup> Structure includes contextual and organizational features that shape the processes of care delivery, which in turn affect outcomes. Megivern and colleagues expanded this model to further specify aspects

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of quality care delivery in the social services context, including both competence and sensitivity in the process of care delivery.<sup>33</sup> In their view, *structures* comprise organizational capacity and climate. Organizational capacity encompasses the contextual factors (eg, geography, operations, resources) that may directly or indirectly influence processes of care delivery and consumer outcomes. Organizational climate describes staff perceptions of the internal culture where processes of care take place, such as staff relationships with leadership and residents. *Processes of care* must be technically and sensitively delivered. Structures and processes of care result in *outcomes* including sustainability, reduction in problems, and satisfaction.<sup>32–34</sup>

Although direct care workers and nurses are well positioned to implement person-centered care practices based on their work roles and knowledge of residents, they need structural support to ensure PCC is delivered and sustained. This support comes from two sources. First is the external environment in which nursing homes operate, including rules, regulations, and quality standards, which can shape quality of life.<sup>35</sup> To facilitate PCC, the organizational context requires adequate budgets for staffing, training and professional development, capital improvements, and supplies.<sup>36</sup> The external environment associated with the availability of these key resources include profit/nonprofit ownership, rural/urban location, size, and Medicaid acceptance.<sup>37</sup> These external structural characteristics have been linked to PCC practices. For example, prior studies have shown that higher quality nursing homes are more likely to adopt PCC practices than their lower quality counterparts.<sup>17</sup>

A second aspect of the structural context of care is the internal functioning of an organization, particularly with respect to actions by directors of nursing and nursing home administrators. These two leadership roles have the responsibility for shaping the overall culture and climate of the organization and its operations. Organizational climate includes shared perceptions among staff about organizational policies, practices, and procedures, and perceptions of which behaviors are rewarded, supported, and expected from leadership.<sup>38</sup> NH leadership has been linked to both staff and resident outcomes (eg, quality of care, job satisfaction).<sup>39</sup> Hunter and her colleagues<sup>40</sup> provide examples of the connection between organizational climate and PCC practices, exploring the connection between the two organizational environment subscales of the Staff Assessment of Person-Directed Care (SA-PDC) and five SA-PDC subscales related to PCC practices.<sup>41</sup> They found significant associations between the organizational environment and PCC practice domains, concluding that staff well-being and organizational culture are key ingredients for ensuring PCC practices. Similarly, Martinez and her colleagues<sup>42</sup> found a high correlation between PCC practices measured by the SA-PDC and organizational climate, as measured by the Organizational Climate Scale.<sup>43</sup> Multiple studies have found leadership is key to implementing beneficial workplace practices. This includes management demonstrating respect for direct care workers and recognizing and responding to their concerns, providing supportive leadership, conveying positive organizational values, and establishing social support mechanisms in NHs.<sup>44–46</sup> Conversely, the top barriers identified included presence of a condescending management style, high job demands, lack of support for self-care, and lack of training in resident care. These findings underscore the essential role of competent and consistent leadership as well as management's role in maintaining satisfied long-term care employees and ensuring PCC.

This study employs the Structure-Process-Outcomes framework to explore the relationship between the structural aspects of care (eg, context of care, internal organizational climate), PCC processes (as measured by staff perceptions using SA-PDC), and staff outcomes (ie, job satisfaction, affective organizational commitment, intent to leave). This study has three objectives. First, we examine the associations and variation between measures of organizational context and perceptions of PCC practices among NH direct care and nursing staff. We hypothesize that staff working in the same NH will have similar

perceptions of PCC practices. Second, we investigate whether positive staff perceptions of the organizational climate are associated with higher staff perceptions of PCC practices. Lastly, we explore whether staff perceptions of PCC practices moderate the relationship between perceptions of the organizational context and climate and staff outcomes.

## Methods

### Design

A two-stage stratified design was used to select nursing home (NH) staff into the study. First, we identified all NHs within a 100-mile radius of Portland, Oregon ( $n = 93$ ). Next, NHs were stratified by rural/urban location, quality, and profit or nonprofit status to assure as representative sample of NH characteristics as possible. Second, with the assistance of administrators, we then surveyed a convenience sample of staff. Typically, administrators either distributed surveys at all-staff meetings or placed surveys in staff break rooms. We recruited 32 nursing homes which mirrored characteristics of nursing homes across Oregon. More information about NH sampling is available elsewhere.<sup>47</sup> The study was approved by the Institutional Review Board (IRB) at (HIDDEN FOR REVIEW) (protocol #174384).

### Sample and data collection

We asked that staff most involved with residents' care complete a brief, anonymous survey about their views of resident support. Flyers describing the study, the location of surveys, and the opportunity to enter a drawing for a \$25 gift card were provided. We also offered a summary of responses to administrators if we received at least 20 completed surveys (to ensure anonymity of staff responses). The survey contained information about confidentiality and included phone numbers for the IRB and principal investigator. Completed surveys were gathered within a few days of the NH participating in the larger study. We did not collect information about the total number or composition of employed staff at the time of the fielding of the surveys.

### Measures and variables

**Structural characteristics** The questionnaire used in this study is available in Supplement 1. Characteristics of the organizational context included size, urban or rural location, quality, ownership type, and administrator tenure (in years). Size was measured by the number of beds within a facility, and used to construct a categorical measure: small to medium ( $\leq 50$  beds), large (51–74 beds), and very large ( $\geq 75$  beds). We matched facility zip codes to the Oregon Office of Rural Health map of service areas to determine if facilities were in a rural/frontier or urban location. Rural areas are defined as greater than 10 miles from a population center of 40,000 people and frontier areas are defined as counties with six or fewer people per square mile.<sup>48</sup> Quality is a binary measure based on the number of deficiency citations a facility received during their last compliance survey period. Facilities were assigned high quality if they received at or below the median number of deficiencies and low quality if they received above the median number of deficiencies during their last licensing survey. Ownership describes whether a NH operates as a for profit or nonprofit organization. Administrators filled out a companion survey in parallel with the staff survey where they self-reported the number of years served in their current role.

Staff assessments of their work setting and organizational climate were used to measure the internal structure of the organization, using three subscales from the organizational environment measure.<sup>41</sup> Subscales include items focusing on management, work with residents, and the physical environment for residents. Staff rate how often

(1 = rarely or none of the time, 5 = all or almost all of the time) they experience organizational support.

**Process** Person-centered care (PCC) practices. These practices were measured by five subscales of the Staff Assessment of Person-Directed Care (SA-PDC) focusing directly on support and care of residents. The SA-PDC was developed and has been used extensively in nursing homes and evidence of its validity has been reported in multiple studies.<sup>40,42,43,53,54</sup> Thirty-five items map onto the following subscales core to PCC: autonomy and choice, personhood, knowing the person, comfort care, and relationships. Response categories include how often with the same response categories described above, or for how many (1 = very few or none, 5 = all or almost all).

**Outcomes** Staff outcomes of interest were job satisfaction, affective commitment (eg, sense of belonging), and turnover intention. We used the Direct Care Worker Job Satisfaction measure (eg, “how satisfied are you with the amount of control you have over your job?” 1 = very dissatisfied, 4 = very satisfied) to proxy job satisfaction.<sup>49</sup> We adapted four questions to measure affective commitment.<sup>50,51</sup> A sample item is “I feel a strong sense of ‘belonging’ to my organization,” 1 = strongly disagree, 5 = strongly agree). Finally, we used three items to measure turnover intention using a five-point scale (eg, “I will probably look for a new job in the next year;” 1 = strongly disagree, 5 = strongly agree).<sup>52</sup>

**Staff covariates** Staff characteristics fall into two general categories: individual and role-based. Individual characteristics include demographic measures such as age (in years), sex, race/ethnicity, and highest level of education. Sex is categorized as female or male. We asked staff to identify all the following racial/ethnic categories that applied: White/Western European/Canadian, White/Eastern European, Middle Eastern, Hispanic/Latino, Black/African/African American, Asian/Pacific Islander, Native American, or other. We then collapsed into four groups: (1) Hispanic/Latino of any race, (2) Black, Indigenous, and Asian/Pacific Islander, (3) White, and (4) Unknown, not listed. We also asked staff to identify their highest level of completed education: less than high school, high school graduate or equivalent, some college, Associate/technical degree, Bachelor's degree, advanced degree or other. These categories were collapsed into high school or less, some college, Associate's/Technical degree, or Bachelor's degree or more. Role characteristics include hours worked per week, residents cared for per day, and work shift. We asked staff to provide the number of hours they usually worked per week and then we categorized them as working part time ( $\leq 34$  h), full time (35–40 h) and over time ( $> 40$  h).

## Data analysis

**Descriptive statistics** We report means, standard deviations, and proportions for facility and staff characteristics for all responding direct care staff and nurses ( $n = 340$ ), which includes the proportion of missing observations. Staff not involved in personal care of residents, such as administrative and maintenance staff, were excluded.

**Missing data imputation** Multiple imputations were used to handle missing values for measures of SA-PDC, organizational environment, and outcomes among staff with valid information about their tenure, shift, number of residents cared for per day, and demographic information, resulting in an analytic sample of 265 respondents from 32 NH.<sup>55</sup>

**Model estimation** Individual staff members are clustered based on organizational context, which is the NH where they work. First, we use random intercepts regression to estimate both within- and between-NH variation in staff's perceptions of PCC practices.<sup>56</sup> That is, we looked at staff responses within each NH to assess similarities and differences in individual staff perceptions within that setting and we examined the variation between settings to determine whether staff perceptions were associated with the setting or setting type. We then estimate a full model to assess associations of facility and individual characteristics with direct care staff perceptions of PCC

practices. Lastly, we include staff perceptions of the residents' environment, management, working with residents, job satisfaction, turnover intention, and affective commitment and adjust for covariates to apply the Structure-Process-Outcome framework. We performed sensitivity analyses by estimating random-intercepts regression models through systematic addition of each independent variable, noting any changes in the magnitude or direction of coefficient estimates. We conducted all statistical analysis using Stata 15.<sup>57</sup>

## Results

### Sample description

The 32 nursing homes (NH) that employed the responding direct care workers and nurses ranged in size from six to 180 beds, with a median of 80 beds (mean = 90.4 beds). Over half of the facilities were very large ( $\geq 75$  beds). Two-thirds of facilities were in an urban location and operated for-profit, and nearly all had a contract to accept Medicaid as payment for services (93.8%) (Table 1). Deficiencies ranged from 0 to 29 with a median of eight. Of the facilities represented in this sample, over half were categorized as “high quality,” or had below 8 deficiency citations. Nursing home administrators reported working in their positions for an average of 7.2 years (SD = 7.5; not shown in table).

A total of 340 direct care workers and nurses are represented in staff characteristics in Table 1. We present descriptive statistics by job type, direct care workers ( $n = 266$ ) and nurses ( $n = 74$ ), separately. Both direct care workers and nurses completed the survey in 23 NH, and only direct care workers responded in eight nursing homes; in three facilities only one staff person responded. Though most direct care workers and nurses identified as White, larger proportions of direct care workers identified as Hispanic or Latino of any race (23.7%), Black or African American (8.3%), Asian or Pacific Islander (7.5%), or Native American/Alaska Native (3.0%) compared to nurses (Table 1). Direct care workers and nurse respondents had worked in their role for a median of 2.5 (range =  $< 1$  to 50 years) and 2.2 years (range =  $< 1$  to 24 years), respectively (averages reported in Table 1). Responding direct care workers cared for an average of 11 residents per day (median = 8 residents) compared to nurses who reported caring for an average 25 residents per day (median = 22 residents).

### Variation in staff perceptions of person-centered care

To calculate composite scores of the SA-PDC and subscales of organizational environment measure, we analyzed imputed data from an analytic sample of 214 direct care workers and 51 nurses ( $n = 265$ ) from 32 nursing homes. Staff perception measures were converted into scores on a scale of 0 to 100 by taking the sum of items within each individual measure and dividing by the total possible score and multiplying by 100 (Table 2). Lower scores correspond to disagreement or low frequency where higher scores correspond to agreement or high frequency depending on the measure. Although the overall SA-PDC scores between direct care workers and nurses did not differ significantly, on average, direct care workers tended to report higher perceptions of knowing the person while nurses tended to rate higher perceptions of comfort care. Direct care workers also reported higher intent to turnover and nurses perceived higher job satisfaction and affective commitment. The average facility-level SA-PDC score across the 32 facilities was 68.4, ranging from 44.2 to 90.9 (not shown in table).

Staff perceptions of person-centered care (PCC) practices were moderately and positively correlated with staff perceptions of the residents' environment ( $r = .66$ ), working with residents ( $r = .56$ ), and managerial support ( $r = .48$ ) (Fig. 1). Other positive, but weaker, correlations were noted between staff perceptions of PCC practices and job satisfaction ( $r = .38$ ) and affective commitment ( $r = .37$ ). Staff

**Table 1**  
Descriptive statistics of responding nursing facilities ( $n = 32$ ) and care staff (direct care workers and nurses  $n = 340$ ).

Facility Characteristics	%	Staff characteristics	Mean (SD)		%	
			DCWs	Nurses	DCW (n=266)	Nurses (n=74)
<b>Geographic Designation</b>		Age (years)	35.7 (12.7)	42.2 (13.0)		
Urban	65.6	Tenure (years)	5.5 (7.3)	4.4 (5.7)		
Rural	34.4	Residents cared for per day	11 (8)	26 (14)		
<b>Size (# beds)</b>		<b>Hours worked per week</b>				
Small to Medium: $\leq 50$	18.8	Part Time ( $\leq 34$ )			25.2	21.6
Large: 51–74	28.1	Full Time (35–40)			65.4	56.8
Very large: $\geq 75$	53.1	Over Time ( $> 40$ )			7.1	21.6
<b>Has Medicaid contract</b>		Missing			2.3	0.0
Yes	93.8	<b>Work Shift</b>				
No	6.2	Days			50.8	51.4
<b>Quality</b>		Evenings			18.4	12.2
High ( $< 8$ deficiencies)	56.3	Nights			5.3	6.8
Low ( $\geq 8$ deficiencies)	43.7	Combination			24.4	28.4
<b>Ownership</b>		Missing			1.1	1.4
For-profit	78.1	<b>Race/Ethnicity</b>				
Non-profit	21.9	Hispanic/Latinx, any race			23.7	5.4
		Alaska Native/Native American			3.0	2.7
		Asian/Pacific Islander			7.5	4.0
		Black or African American			8.3	4.1
		White			45.9	75.7
		Other, not listed			4.5	6.8
		Missing			7.1	1.4
		<b>Level of Education</b>				
		High school or less			25.2	0.0
		Some college			43.2	0.0
		Associate's/Technical			17.7	52.7
		Bachelor's degree or more			9.8	29.7
		Missing			4.1	17.6
		<b>Sex</b>				
		Female			78.9	83.8
		Male			15.8	10.8
		Missing			5.3	5.4

Note. Percentages may not add to 100 due to rounding.

perceptions of PCC and turnover intention were weakly and negatively associated ( $r = -0.25$ ). Stronger associations are shown between staff perceptions of the organizational internal structure and outcomes.

The average intraclass correlation across all imputed data sets in SA-PDC scores for this sample is 0.07 suggesting high variation among staff within the same NH. Fig. 2 demonstrates how widely direct care and nursing staff perceptions of person-centered care vary within NHs, using a randomly selected imputed data set.

#### Random intercepts regression model estimation

**Organizational context and staff characteristics** First, we estimated random intercepts regression models to assess associations between

facility organizational context and climate as measured by the organizational environment measures (structures) and scores of the SA-PDC (process), accounting for individual staff characteristics. In bivariate analysis, facility size and Medicaid acceptance were negatively associated with lower staff SA-PDC perceptions, while nonprofit ownership, perceptions of working with residents, the environment, and management had positive associations with higher SA-PDC perceptions. Staff characteristics associated with SA-PDC scores included working the night shift or part time, or identifying as Hispanic/Latino of any race in both (un)adjusted models (Supplement 2). Table 3 presents the estimates and 95% confidence intervals of the fully adjusted models for organizational context and individual characteristics (Model 1), staff perceptions of the environment (Model 2),

**Table 2**  
Staff perceptions of person-centered care and the organizational climate scores, means, standard deviations, by job type.

Measure (# items)	Cronbach's alpha	Average inter-item correlation	Mean score (SD)	
			DCW (n = 214)	Nurse (n = 51)
Person-Directed Care Staff Assessment (PDC-SA; 35)	0.95	0.36	68.4 (16.2)	68.8 (13.0)
Autonomy (7)	0.86	0.46	62.2 (20.5)	65.0 (16.0)
Personhood (7)	0.88	0.52	71.7 (19.0)	67.0 (17.9)
Knowing the person (7)	0.91	0.59	60.5 (16.8)	53.0 (16.6)
Comfort care (8)	0.83	0.37	72.6 (17.3)	78.9 (12.4)
Relationships (6)	0.92	0.66	65.2 (23.2)	71.4 (19.7)
Residents' personal environment (4)	0.81	0.52	71.7 (19.3)	70.6 (18.5)
Working with residents (5)	0.81	0.42	64.7 (20.3)	75.1 (15.5)
Management/structure (5)	0.86	0.51	61.2 (16.8)	66.71 (15.2)
Job satisfaction (17)	0.94	0.47	67.9 (14.3)	76.8 (13.8)
Turnover intention (3)	0.92	0.79	54.3 (23.9)	40.8 (20.3)
Affective commitment (4)	0.91	0.70	68.8 (19.5)	79.5 (17.2)

Notes. Abbreviations: "SD" = standard deviation; "DCW" = direct care worker.

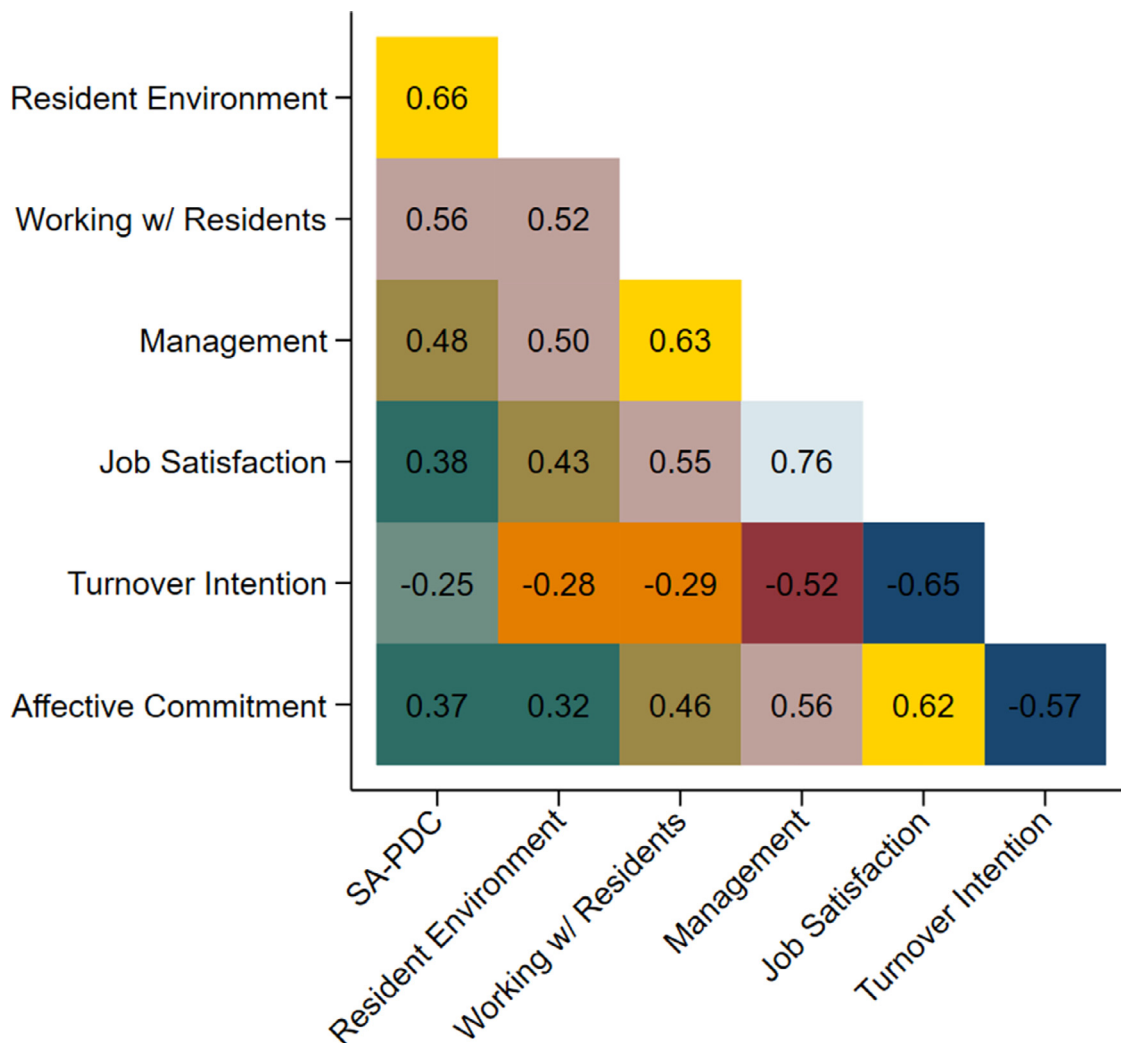


Fig. 1. Pairwise correlations among measures of the organizational environment, staff outcomes, and Staff Assessment of Person-Directed Care scores.

Note. All pairwise correlations are significant at the level of  $p < .05$ .

working with residents (Model 3), management (Model 4), and individual characteristics (Model 5). Staff working in facilities that accept Medicaid reported lower SA-PDC scores. Additionally, nonprofit status is associated with higher SA-PDC scores in models that account for staff perceptions of working with residents and management, though including perception of the resident environment attenuates that relationship. Perceptions of the resident environment, working with residents, and managerial support were also positively associated with higher staff perceptions of PCC practices, though the coefficient sizes are small. For example, a one-point increase in perception of the resident environment is associated with a 0.5 point increase in SA-PDC score (Model 2, Table 3).

**Organizational environment and staff outcomes** We then examined the relationship between organizational contextual factors, internal climate, and job satisfaction, affective commitment, and turnover intention (Fig. 3). Compared to direct care workers, nursing staff reported greater job satisfaction, affective commitment, and lower turnover intention. Staff in nonprofit communities tended to report higher job satisfaction, affective commitment, and lower turnover intention. The effect sizes of staff perception of management were 3.5 to 6 times larger than the other measures of internal structure. Perception of management was positively associated with job satisfaction ( $\beta = 0.6$ , 95% CI: 0.4, 0.7) and affective commitment ( $\beta = 0.4$ , 95% CI: 0.3, 0.7) and was negatively associated with turnover

intention ( $\beta = -0.7$ , 95% CI: -1.0, -0.5). Staff perceptions of PCC practices were not associated with staff outcomes.

### Discussion and implications

In this study, we adapted the Structure-Process-Outcome framework to examine relationships among the structural elements of nursing homes (NH), person-centered care (PCC) processes, and staff outcomes of job satisfaction, affective commitment, and turnover intention among NH direct care workers and licensed nurses in Oregon. We found no significant differences in overall perceptions of providing PCC between direct care workers and nurses in this sample. With respect to the relationship between structure and process, we found that perceptions of the organizational climate (ie, residents' environment, working with residents, and management) within the nursing home are associated with staff reports of providing PCC. Our findings are consistent with others who have reported findings using the SA-PDC measure.<sup>40,42,43</sup>

Staff perceptions of management appear to influence staff outcomes in addition to cultivating PCC.<sup>58</sup> Regardless of whether staff perceptions of PCC practices were included in the regression model, more positive staff perceptions of management were associated with greater job satisfaction and affective commitment and lower turnover intention. PCC may benefit those responsible for care delivery,

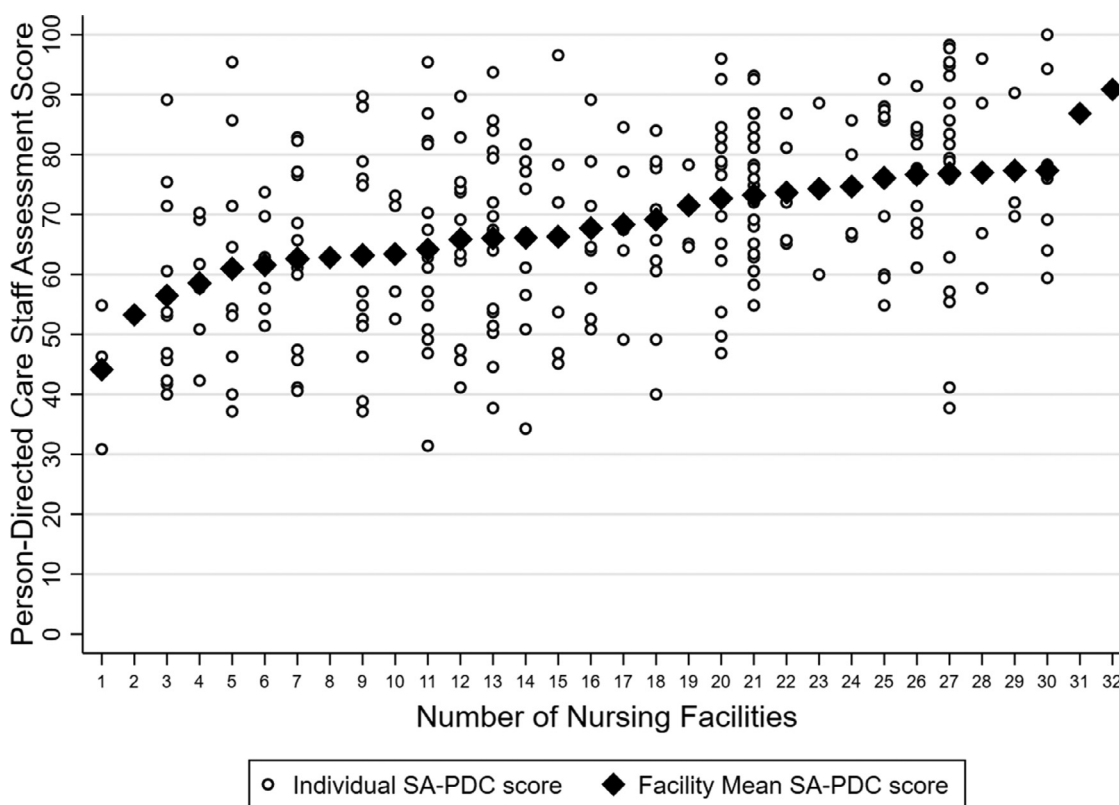


Fig. 2. Within and between facility comparison of Staff Assessment of Person-Directed Care scores among 265 direct care workers and nurses.

but satisfaction in work, a sense of belonging to the organization, and wanting to leave a position seem to depend on the organizational work climate.

We hypothesized that staff working within the same nursing home would have more similar perceptions of PCC practices compared to staff working in different nursing homes, which was not supported in this sample. Instead, we found that staff within the same nursing home have widely varying perceptions of PCC practices as measured by the SA-PDC. In this sample, working in the same organizational context and with the same resident population did not equate to similar perceptions of care delivery among direct care workers and nursing staff, indicating lack of shared perception of PCC regardless of role or job type.

These results indicate a weak climate across these NHs with respect to PCC practices. Climate strength reflects the degree of consensus among staff within an organization. A weak climate occurs when organizational policies and procedures, or the practices that emerge from policies and procedures, are inconsistent.<sup>39</sup> A strong organizational climate is associated with interaction and interdependence between work units, frequent communication, and a leadership that fosters a shared strategic vision for the work.<sup>39</sup> Although some staff in each nursing home perceived themselves to provide relatively high levels of PCC, many others in the same organization did not. These findings suggest that PCC in these nursing homes is more of an individual practice rather than an organizational practice. This implies that within these nursing homes, leadership is not clearly prioritizing or providing consistent oversight specific to PCC practices within their communities.

#### Practice and research implications

The Structure-Process-Outcome framework suggests some possible explanations for the impact of a weak organizational consensus on PCC practices that warrant further examination. First is

consideration of the external structures shaping long-term care, including regulation and workforce availability. The language of PCC is ubiquitous within the long-term care system; it is considered the gold standard of care and a basis for quality of life. Yet, policies regulating long-term care settings have been criticized for rigidity and an overemphasis on safety, security, and order and not reflective of quality of life.<sup>35</sup> At the same time, however, Hande and her colleagues<sup>35</sup> find hope that policy trends in Canada are moving toward support of quality of life. They found that newer regulations are more likely to promote flexibility and innovation while at the same time providing language which emphasizes resident-centered care. We recommend that the same review of regulations be conducted in the U.S. to make regulation and enforcement consistent with the goals of PCC practices. This includes using person-centered language and providing staff flexibility necessary for enacting PCC. We note that regulation coupled with financial incentives have resulted in increased PCC practices.<sup>17</sup>

Workforce issues continue to plague long-term care, with almost no progress made on the recommendations first published by the Institute of Medicine in 2008.<sup>59</sup> It is beyond the scope of this paper to describe the well-documented shortage of long-term care staff, high rates of turnover among all types of staff, including direct care workers who are chronically underpaid, under trained, and undervalued. The COVID-19 pandemic has shown us in the starkest of terms the cost of underinvestment in this workforce. We must insist on renewed energy to fully address those recommendations.

Second is examination of the internal structures of individual NH which are shaped by leadership. Specifically, directors of nursing and administrators are responsible for enacting and supporting the organizational policies and procedures. Although these occur within the large regulatory and workforce context, leadership shapes much of the work environment within that context, including staffing, staff mix, training priorities, coaching supervision, building teamwork,

**Table 3**  
Results from random intercepts regression of organizational and individual characteristics and staff perceptions of person-centered care.

	Model 1β [95% CI]	Model 2β [95% CI]	Model 3β [95% CI]	Model 4β [95% CI]	Model 5β [95% CI]
<b>Context</b>					
Size (ref. Small-Med)					
Large (51–74 beds)					
Very large (≥75 beds)	-4.0 [-10.1,2.0]	-1.5 [-4.8,1.8]	-5.0* [-9.7,-0.3]	-2.4 [-7.2,2.3]	-2.6 [-6.0,0.8]
Rural (ref. Urban)	1.9 [-2.5,6.3]	1.2 [-1.7,4.1]	1.5 [-1.3,4.3]	1.8 [-1.8,5.4]	1.3 [-1.2,3.8]
Nonprofit (ref. For profit)	2.7 [-2.1,7.6]	0.5 [-2.3,3.3]	3.0 [-0.1,6.1]	3.2 [-0.2,6.6]	1.3 [-1.0,3.7]
Accepts Medicaid	-7.8** [-13.6,-2.0]	-6.8** [-11.2,-2.4]	-3.7 [-7.6,0.3]	-3.0 [-7.7,1.7]	-4.4* [-8.0,-0.8]
Low Quality	2.7 [-3.1,8.6]	2.5 [-0.7,5.7]	3.5 [-0.5,7.5]	1.6 [-2.9,6.1]	2.8 [-0.2,5.8]
Admin Tenure (years)	0.1 [-0.2,0.4]	0.1 [-0.0,0.3]	0.1 [-0.1,0.2]	-0.0 [-0.2,0.2]	0.1 [-0.0,0.2]
<b>Individual</b>					
# Residents/day	0.2 [-0.1,0.4]	0.1 [-0.1,0.2]	0.0 [-0.2,0.2]	0.1 [-0.1,0.3]	0.0 [-0.2,0.2]
Nurse (ref. DCW)	0.1 [-6.4,6.7]	0.0 [-4.7,4.7]	-1.7 [-6.7,3.2]	-0.3 [-6.2,5.5]	-0.9 [-5.2,3.3]
Shift (ref. Day)					
Evenings	-2.0 [-7.0,2.9]	0.3 [-4.1,4.8]	-2.0 [-6.4,2.4]	-0.1 [-4.0,3.9]	-0.1 [-3.8,3.7]
Nights	-11.1* [-20.2,-2.1]	-7.9 [-16.3,0.5]	-4.5 [-12.7,3.8]	-7.3 [-14.9,0.3]	-5.1 [-13.1,3.0]
Combination	-4.3* [-7.8,-0.9]	0.6 [-2.6,3.8]	-3.3* [-6.4,-0.2]	-2.2 [-5.2,0.8]	-0.1 [-3.0,2.8]
Hours worked (ref. Full time)					
Part time (≤34 h)	-5.2* [-9.4,-1.1]	-3.3* [-6.2,-0.3]	-4.1* [-7.7,-0.6]	-5.1** [-8.7,-1.5]	-3.4* [-6.1,-0.6]
Over time (>40 h)	1.3 [-4.0,6.6]	-0.6 [-4.5,3.2]	0.4 [-5.8,6.6]	-0.2 [-5.8,5.4]	-0.8 [-5.1,3.6]
Education (ref. ≤ HS)					
Some college	2.0 [-3.0,7.0]	1.8 [-1.7,5.2]	0.8 [-2.3,3.9]	3.1 [-1.5,7.7]	1.5 [-1.3,4.2]
Associates/Technical	-2.0 [-7.9,3.8]	-0.4 [-5.6,4.8]	-3.2 [-7.5,1.2]	-1.6 [-6.4,3.2]	-1.4 [-5.9,3.1]
Bachelor's +	-5.7 [-12.4,0.9]	-1.2 [-6.1,3.6]	-6.4* [-11.5,-1.3]	-4.6 [-10.4,1.2]	-2.8 [-7.1,1.5]
Race/Ethnicity (ref. NH White)					
Black/Indigenous/AAPI	2.0 [-3.6,7.6]	-0.5 [-4.4,3.5]	3.0 [-0.3,6.3]	1.0 [-3.2,5.1]	0.7 [-2.4,3.8]
Hispanic/Latino, all race	-5.1* [-9.6,-0.6]	-4.6** [-7.6,-1.7]	-1.6 [-4.6,1.4]	-4.5* [-8.4,-0.7]	-3.0* [-5.7,-0.2]
Unknown, not listed	7.7* [1.7,13.6]	5.4 [-0.7,11.4]	5.5* [0.8,10.1]	6.4** [1.6,11.1]	4.8 [-1.9,11.4]
Male (ref. Female)	1.1 [-4.3,6.5]	1.3 [-3.4,6.1]	-1.9 [-5.5,1.8]	-1.2 [-5.5,3.1]	-0.6 [-4.6,3.5]
Age (years)	-0.0 [-0.2,0.1]	0.0 [-0.1,0.1]	-0.0 [-0.2,0.1]	-0.1 [-0.2,0.1]	0.0 [-0.1,0.1]
<b>Climate</b>		0.5*** [0.4,0.6]			0.3*** [0.2,0.5]
Resident environment					
Working with residents			0.4*** [0.4,0.5]		0.2*** [0.1,0.3]
Management/support				0.4*** [0.4,0.5]	0.1 [-0.0,0.2]
N	265	265	265	265	265

Abbreviations: “DCW” = direct care worker; “HS” = high school or equivalent; “NH” = non-Hispanic; “AAPI” = Asian American or Pacific Islander.

\**p* < 0.05.  
\*\**p* < 0.01.  
\*\*\**p* < 0.001.

and creating a civil workplace. Our findings demonstrated that management practices are associated with positive staff outcomes including job satisfaction and affective commitment to the organization. Although we did not find these management practices to predict PCC practices at an organizational level, we do not know the extent to which any directors of nursing and nursing home administrators in our sample focused explicitly on prioritizing and implementing PCC practices. Future research should identify specific organizational structures that support both positive staff outcomes and accomplishment of PCC goals.

A third area for further inquiry involves examining processes related to leadership roles which directly impact PCC practices. Leadership goals specific to PCC practices must be clear to all staff who in turn must feel they have the time, knowledge, tools, and support available to them to achieve these goals. To date, general knowledge of directors of nursing and nursing home administrators' effectiveness is limited, particularly as it relates to structure and process.<sup>38</sup>

**Limitations**

This study has several limitations. First, these data were collected in a convenience sample of staff working in nursing homes within a 100-mile radius of Portland, OR. These findings may not be generalizable to other settings or to the rest of the state. Second, these data are cross-sectional as identifying causal relationships among the

measures used to proxy structures (including organizational climate), processes, and staff outcomes was not the original purpose of this study. It is possible this analytic sample is too small to identify these anticipated effects. It is also possible that a longitudinal study design could more meaningfully measure staff perceptions of PCC within NHs. In addition to the research recommendations listed above, a future study designed to capture staff's perceptions of PCC over time would allow for a more accurate examination of mediating factors that might explain the relationship among NH and staff characteristics, staff engagement, perceptions of the work environment, job satisfaction, and staff perceptions of PCC. In addition, future studies should examine the role of leadership in prioritizing and enacting PCC practices. Our study is also limited to investigating how staff perceive PCC practices within NHs, which may or may not align with the perceptions of care receivers: residents. To more comprehensively understand how the process of PCC is actualized in practice, it is essential to incorporate residents' views, perceptions, and experiences. Future research can compare and contrast staff and residents' views of PCC practices and determine if the within-setting variation of staff's perception of PCC in this study is reflected in a facility's resident population. This paper focused on NH settings. With an overwhelming preference to age in place and outside of institutional settings, there is a need to expand our understanding of PCC to home-and community-based settings and services and capture the views of other types of care partners.



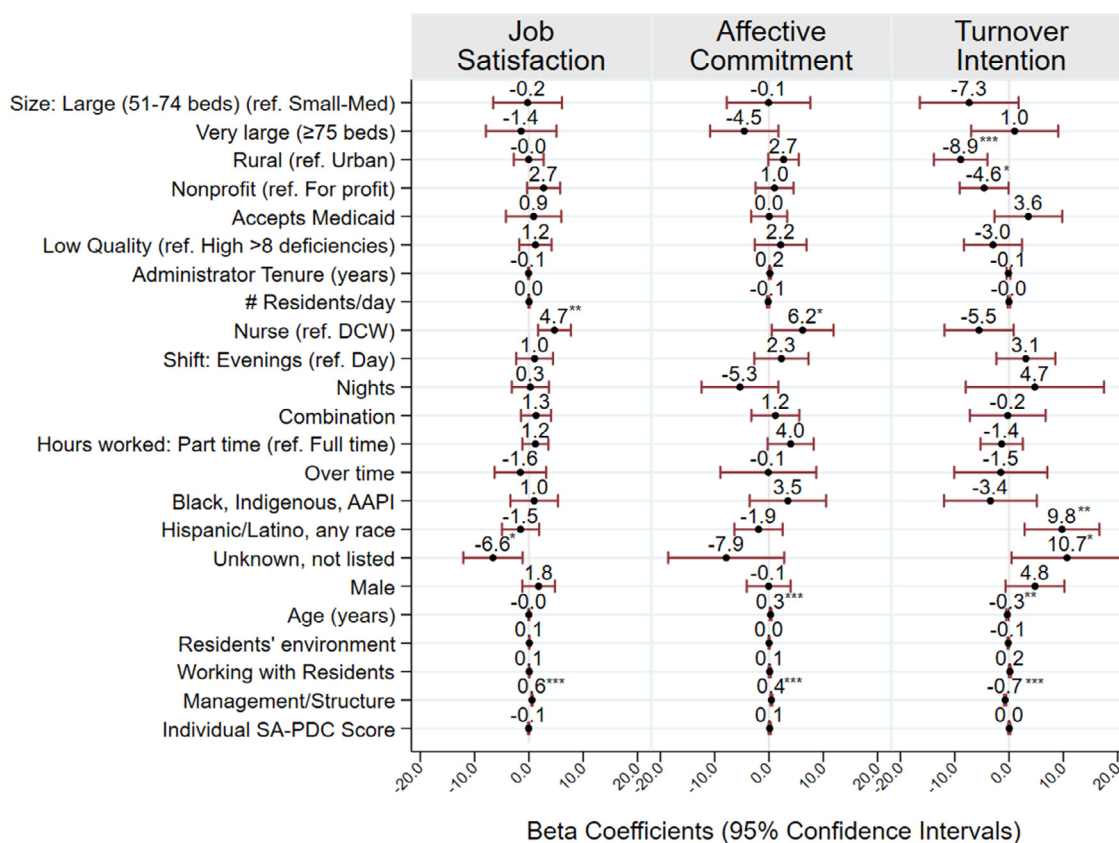


Fig. 3. Results from random intercepts regression of organizational and individual characteristics, staff perceptions of person-centered care and staff outcomes.

Notes. \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ . Abbreviations: "DCW" = direct care worker; "HS" = high school or equivalent; "NH" = non-Hispanic; "AAPI" = Asian American or Pacific Islander.

## Conclusion

This study provides insights into relationships among organizational context, climate, person-centered care (PCC) processes, and staff outcome characteristics in a sample of Oregon nursing homes. Working in the same facility and presumably with the same resident population does not mean staff will have similar perceptions of PCC practices. Cultivating a supportive work context in which nursing home leaders convey a vision of PCC supported through clear and consistent policies and procedures is key to promoting PCC practices, increasing job satisfaction, elevating affective commitment, and reducing turnover intention. We note that these data were collected before the COVID-19 pandemic. Issues of staffing and quality of life for residents have only increased.<sup>60</sup> More than ever, we need to establish systems to support long-term care staff in their work which must include providing PCC.

## Declaration of Competing Interest

The authors of this manuscript certify that they have no affiliations with or involvement in any organization or entity with any financial interest or nonfinancial interest in the subject matter or materials discussed in this manuscript.

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## Supplementary materials

Supplementary material associated with this article can be found in the online version at doi:10.1016/j.gerinurse.2021.11.018.

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