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Organizational Climate and Hospital Nurses' Caring Practices: A Mixed-Methods Study

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Abstract: Organizational climate in healthcare settings influences patient outcomes, but its effect on nursing care delivery remains poorly understood. In this mixed-methods study, nurse surveys ($N = 292$) were combined with a qualitative case study of 15 direct-care registered nurses (RNs), nursing personnel, and managers. Organizational climate explained 11% of the variation in RNs' reported frequency of caring practices. Qualitative data suggested that caring practices were affected by the interplay of organizational climate dimensions with patients and nurses characteristics. Workload intensity and role ambiguity led RNs to leave many caring practices to practical nurses and assistive personnel. Systemic interventions are needed to improve organizational climate and to support RNs' involvement in a full range of caring practices. © 2014 Wiley Periodicals, Inc.

Keywords: organizational climate; work environment; nursing practice; caring; nurse–patient relations; unlicensed assistive personnel

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Despite mounting evidence that adverse patient outcomes are associated with aspects of the environments in which nurses work (Aiken, Clarke, Sloane, Lake, & Cheney, 2008; MacDavitt, Chou, & Stone, 2007), the elements of organizational climate that directly affect nursing practice remain poorly understood. In resource-constrained work environments, activities requiring interaction with patients can fall by the wayside (Aiken et al., 2001; Kalisch, Landstrom, & Williams, 2009; Lucero, Lake, & Aiken, 2009; Schubert, Glass, Clarke, Schaffert-Witvliet, & De Geest, 2007).

Nurses' caring practices, their purposeful presence and interaction with patients during nursing activities such as assessment and monitoring of patients health status, comfort care, building therapeutic relationships, and teaching (Cossette, Côté, Pepin, Ricard, & D'Aoust, 2006; Duffy & Hoskins, 2003; Roch, 2008) are integral to the profession (Ten Hoeve, Jansen, & Roodbol, 2014) and fundamental to quality of care (Duffy, 2009; Woolf, 2004). Caring practices are nurses' behaviors and attitudes in interactions with patients when providing direct care (hands-on or face to face activities, as opposed to work performed away from the patient) (Cossette et al., 2006).

In the Quality-Caring Model©, Duffy and Hoskins (2003) posited that the reality experienced by nurses in an organization influences their performance of caring practices. In that model, caring processes are relationship-centered and grounded in caring factors such as mutual problem solving, attentive reassurance, and attention to basic human needs. In the present study, the Quality-Caring Model© provided a basis for a comprehensive mixed-methods approach to explain associations between organizational climate and nurses' and other workers' performance of caring practices.

Organizational Climate and Nursing Care Processes

Organizational climate refers to the aggregate of employees' perceptions of their work environment (Parker et al., 2003; Rousseau, 1988). Organizational climate influences attitudes and expectations and has direct effects on employee behaviors (Rousseau, 1988; Schneider, Ehrhart, & Macey, 2013) and nurses' well-being, including occupational health outcomes (Gershon et al., 2007; MacDavitt et al., 2007). To date, however, investigations of organizational climate's influences on nurses have focused on care outcomes rather than processes of nursing care. The organizational contextual element most consistently correlated

with quality of care is the perceived adequacy of staffing (Hinno, Partanen, & Vehviläinen-Julkunen, 2011; Laschinger & Leiter, 2006; McCusker, Dendukuri, Cardinal, Laplante, & Bambonye, 2004; Rochefort & Clarke, 2010). Perceptions of nurse managers' ability and nurse-physician relationships also have surfaced as important predictors of outcomes. However, results have not been consistent. Friese (2005) observed no significant association between nurse manager ability and various outcomes in oncology nurses, while Van Bogaert, Meulemans, Clarke, Vermeyen, and Van de Heyning (2009) found that manager ability was the only factor directly influencing nurses' assessments of quality of care. Such variation suggests a need for broader and more theoretically driven research.

Despite the refinement of measures of caring in nursing practice (Watson, 2009), limited quantitative research has been conducted on the components of organizational climate that promote or constrain nurses' performance of caring practices. In qualitative findings, the components most important for maintaining quality caring practices were peer support, role clarity, support from nurse managers, equitable distribution of workload, and adequate human and material resources (Enns & Gregory, 2007; Finfgeld-Connett, 2007; Wilkin & Slevin, 2004; Yam & Rossiter, 2000). To our knowledge, no systematic exploration of the influence of organizational climate and its component dimensions on nurses' caring practices has been reported.

A final distinction between this study and prior research relates to the operational definition of nursing team. In the majority of earlier studies, only the perspectives and practices of registered (professional) nurses were examined, whereas in most healthcare settings nursing care is provided by groups of workers, including practical nurses and nursing care assistants (McKenna, Hasson, & Keeney, 2004), under the leadership of nurses serving as front-line managers, charge nurses, and clinical nurse specialists. Each of these types of team members has a perspective on organizational climate and nursing caring practices that complements that of the direct-care registered nurse (RN).

The Quality-Caring Model©

Duffy and Hoskins' (2003) theoretical perspective combines the components of the structure–process–outcome model defined by Donabedian (1966) with the central constructs of Watson's Theory of Human Caring (Watson, 1988). Structures (e.g., how care is organized) are proposed to influence nurse caring (represented here by caring practices) and through them influence care outcomes. Duffy and Hoskins (2003) defined structure as "important factors that are present prior to the delivery of health care" (p. 80); factors include aspects of the patient, the patient's family, the healthcare provider, and the healthcare system.

The present study was focused on structure in terms of organizational climate, a factor unique to each workplace (Gagnon, Paquet, Courcy, & Parker, 2009; Parker et al., 2003; Rousseau, 1988) in relation to processes of care. A related concept, nursing practice environment (Gershon et al., 2007; Warshawsky & Havens, 2011), refers to nurses' perspectives regarding a narrower subset of organizational elements believed to be key to nursing care quality (Clarke, 2006). Nursing practice environment factors overlap with components of organizational climate (MacDavitt et al., 2007; Parker et al., 2003; Rousseau, 1988), but the broader concept of organizational climate was deemed more suitable for testing the propositions in Duffy and Hoskins' (2003) model.

According to Duffy and Hoskins (2003), nurse caring incorporates "physical work (doing), interaction (being with) and relationship (knowing)" (p. 82). Caring practices can be considered independent when the nurse performs them autonomously and is solely responsible for them, and collaborative when they are shared among members of a team. The overall purpose of this two-phase study was to explain how organizational climate, defined as perception of the work environment, affected nurses' caring practices in an urban hospital. The third component of the model, outcomes of care, was not under direct study here.

Methods

Design and Setting

This was a mixed-methods study involving two phases. After conducting a cross-sectional survey and analyzing the data at the level of the individual nurse in the first phase, we conducted a second phase using a single case study design with embedded units of analysis (organization/sites, care units, individual informants). The stakeholder views obtained in Phase 2 were used to broaden and deepen the observations from Phase 1 (Creswell & Plano Clark, 2011; Yin, 2009), with alternative and complementary perspectives regarding the impact of organizational climate on nurses caring practices (Erzberger & Kelle, 2003; Morse, 2003).

We conducted the study in an urban hospital delivering tertiary and quaternary services in the province of Quebec, Canada, where the participants' language of practice was French. The hospital has a main site for adult medical, surgical and acute care, and a smaller psychiatric site; with the exception of a very small adolescent psychiatry unit, no inpatient pediatric services are provided. The setting is typical of Quebec facilities with a similar mandate in terms of its size, mission, and organizational structure. In most clinical care units, RNs provide direct-care work on teams with nursing care assistants. Over the last decade, a group of workers roughly comparable to licensed practical nurses (LPNs) was added to teams on medicine and surgery units.

The study was approved by the hospital's research ethics committee. For the survey, respondents' return of completed questionnaires implied informed consent. Each interview participant signed a consent form. No financial or material compensation was offered to participants.

First Phase

Participants. All direct-care RNs at the study hospital, including emergency department nurses, were recruited. Operating room and outpatient clinic nurses were excluded on the advice of front-line nurse managers for these units, who informed us that questionnaire content related to caring practices was not well-suited to the nature of practice in these settings. In Spring 2006, of 693 RNs who met our selection criteria, we approached the 648 who were not on leave. Each received a 10-page questionnaire requiring about 30 minutes to complete. Three weeks after the questionnaires were distributed, we sent all 648 written reminders to complete and return the questionnaires to the research team leader (GR) over 2 weeks. Of the 648, 292 nurses ultimately completed the questionnaire (a response rate of 45%), and their responses are analyzed here.

Measures. The survey consisted of French-language versions of two established measures, as well as sociodemographic questions, a question regarding the proportion of patients respondents had cared for who were unconscious, and a comments section that provided supplemental data for the second phase of this study.

Organizational climate. Organizational climate was measured using the French version of the CRISO Psychological Climate Questionnaire (CRISO-PCQ; Gagnon et al., 2009), an adaptation of an instrument developed by Jones and James (1979), who documented the content validity of the original English-language version and the potential for scores to be aggregated at the organizational level, and modified by Parker et al. (2003). This instrument operationalizes climate as individuals' cognitive representations of their work environment (Parker et al., 2003) and thus reflects our definition of organizational climate, namely the subjective realities of a position that influence attitudes, expectations, and behaviors at work.

The Gagnon et al. (2009) version of the CRISO-PCQ consists of 60 items in 15 subscales, grouped into five theoretical dimensions. The five dimensions, along with their corresponding subscales, are: (1) job (importance, autonomy, challenge), (2) role (clarity, conflict, workload), (3) leadership (trust and support, goal emphasis, work facilitation), (4) work group (warmth, pride, cooperation), and (5) the organization (innovation, justice, support). Respondents rated each item on a 5-point Likert-type scale ranging from *strongly disagree* to *strongly agree*, with high scores corresponding to positive perceptions of the work environment (for examples of items, see Gagnon et al., 2009). The 15 subscales in the French-language version showed Cronbach alphas from 0.57 to 0.92 and a good overall fit based on confirmatory factor analysis in a sample of nursing and other hospital personnel in Québec.

In the present study, we followed Gagnon et al.'s (2009) recommendation to group the 15 subscales into the five theoretical dimensions listed above for analysis. We later dropped an item ("Many people outside this organization are affected by how I do my job") because its correlations with the other items in the job dimension were exceptionally low ($r = .02–.07$). Due to the limited number of participants, it was not possible to test the factorial validity of the 60-item five-dimensional structure. Internal consistencies of the five dimensions in the present sample, as assessed with Cronbach alpha, ranged from 0.75 to 0.90, and Cronbachs alpha for the entire instrument was 0.95.

Caring practices. To measure caring practices we used three subscales of the Caring Nurse-Patient Interaction Short Scale (CNPISS), originally developed in French by Cossette et al. (2006) to reflect what Watson (1988) referred to as 10 carative factors. Its 23 items are grouped into four dimensions of caring: humanistic, clinical, relational, and comforting, which were supported in confirmatory factor analysis (Cossette, Pepin, Côté, & de Courval, 2008). Respondents rate the frequency with which they engaged in various caring practices over the previous 2 weeks on 5-point scales ranging from *almost never* to *almost always* (for examples of items, see Cossette et al., 2008). Higher scores on the CNPISS correspond to higher frequency of performing the caring practices over the prior two weeks. Alpha coefficients for importance, competence and realism item ratings ranged from 0.91 to 0.95 for the total score and from 0.61 to 0.95 for the four dimensions (Cossette et al., 2008).

Because we judged that items in the humanistic care dimension, which refer to the expression of values and philosophical foundations, were ill-suited to self-reports of frequency, we chose not to include this subscale in the survey. Because Watson (1988) proposed that all caring practices are rooted in humanistic values and philosophical foundations, humanism is arguably reflected in the content of the other three subscales. Nevertheless, this modification of the scale and its possible implications for the relevance of earlier psychometric validation should be borne in mind. Internal consistencies of the clinical (nine items), relational (seven items), and comforting (three items) care subscales were $\alpha = 0.78$, 0.93, and 0.62 in the present data set, respectively. The low level of the last coefficient is likely a reflection of the small number of items. The overall score calculated using all 19 items was the dependent variable in the regression analysis and had a Cronbach alpha of 0.92 in this sample.

Control variables. A last set of questions allowed us to describe the study sample and assess potential confounders of associations between organizational climate and caring practices. Items included age, sex, and personal characteristics of the RNs, such as employment status, education, number of years worked at the hospital and as

an RN, clinical practice area, and shift worked. Because the Quality-Caring Model© suggests that patients' characteristics, such as level of consciousness, can influence the caring practice process and outcomes, nurses were asked the percentage of the patients they had cared for over the previous 2 weeks who were unconscious. This variable was dichotomized as none (no unconscious patients) or any (one or more unconscious patients).

Analysis of Phase 1 data. First, descriptive statistics were calculated to depict sample characteristics and distributions of the explanatory and outcome variables. We calculated internal reliability coefficients for each derived subscale. Next, bivariate analyses were used to determine whether any study variables differed by socio-professional characteristics. Finally, to determine whether organizational climate was associated with the frequency of caring practices, we fitted regression models predicting the frequency of caring practices from organizational climate measures. We entered the five organizational dimensions individually, then simultaneously, as potential predictors of nurses' performance of caring practices.

Four nurse characteristics based on the Quality-Caring Model© (nurse experience, education, area of clinical practice, and unconscious patients in the caseload) were evaluated as potential confounders of the relationship between organizational climate and caring practices. Nurse experience and education level were dropped from later analyses because neither was associated with caring practices. The two remaining control variables (area of clinical practice and unconscious patients in the caseload) were entered as a block in the first step of each model.

All analyses were performed using SAS for Windows, version 9.2 (SAS Institute, Cary, NC, USA). A significance level of $p < .05$ was used (Tabachnick & Fidell, 2006). Missing data were handled using a multiple imputation approach (SAS PROC MI) in which missing values were replaced with a set of plausible values generated from Markov-chain Monte Carlo simulations.

Second Phase

Sources of information and participant selection. The second phase involved three information sources: (a) interviews with key informants, (b) the comments section of the Phase 1 survey, and (c) selected internal and external hospital documents that were recommended by informants and resource people as relevant to the study. Phase 1 results informed the sampling plan and interview protocol in Phase 2.

Interviews were conducted with six categories of workers directly involved in care or responsible for professional nursing practice: (a) four direct-care RNs; (b) two LPNs; (c) three nursing care assistants; (d) two charge nurses; (e) two clinical nurse specialists; and (f) two front-line nurse managers. Participants were selected using stratified purposeful sampling, in which each case was chosen to reflect pre-specified combinations of parameters (Sandelowski, 2000). First, we identified three representative care units based on typical size, staffing mix, and the results from Phase 1: a medicine and a surgery unit from the larger site, and a psychiatry unit from the smaller site. Second, with the assistance of nurse managers and other institutional contacts, we compiled a list of possible key informants in the six worker categories in the two sites. Finally, we added informants who responded to recruitment posters on the target units.

A single member of the research team (GR) contacted and interviewed the key informants at times and places chosen by informants. Throughout the interviews, we constantly compared data from the new interviews against previously collected data and considered saturation to be reached when data became redundant and no new information was being added. In all, we conducted 15 individual semi-structured interviews during the autumn of 2006, each lasting 45–120 minutes. Questions were similar across interviews (e.g., How would you describe the organizational climate in your hospital/unit? Do you think the organizational climate has an influence on nurses' caring practices? If yes, can you explain whether some aspects have greater influence on the nurses' caring practices?). Respondents were not provided with any formal definitions of the constructs of interest and were given time to fully share their thoughts.

Two further data types were analyzed. Of the questionnaire respondents, 39% provided a total of 112 free-text responses in the comments and suggestions section at the end of the Phase 1 questionnaire, which were transcribed and analyzed. Second, we examined and analyzed 147 hospital documents. These materials, collected prior to and during the interview period, were about the organization and delivery of nursing services, such as materials articulating a professional practice model, policies and procedures, the hospital newsletter, annual reports, and press releases from the organization.

Analysis of Phase 2 data. Directed content analysis (Hsieh & Shannon, 2005) was used. We continuously assessed, contrasted, and synthesized the interview data and other complementary sources of information as they were collected. We used a research journal and memos (Birks, Chapman, & Francis, 2008) to track our decisions, explore relationships and explanations in the data, inform our analysis, and clarify the research phenomena in context.

Interview data. Interviews were digitally recorded, professionally transcribed, and then transcripts verified by the principal analyst (GR). The transcripts were imported into Atlas.ti qualitative analysis software (Scientific Software Development, Berlin) to facilitate data organization and coding. Analysis began with development of an initial list of 40 codes based on the variables of interest from the conceptual framework (i.e., a structural component, such as system as organizational climate; process component, such as caring practices). As analysis proceeded, codes were

added or revised only after discussion with and agreement of the second analyst (CAD). Ultimately, 70 codes were used to classify 1,416 quotes.

Common themes and subthemes supported by the quotes were identified, and within-case interpretations involving common and general features, regularities, similarities, differences, and natural aggregates of data across interviews were developed (Miles & Huberman, 1994). Analyses were undertaken at three levels: organization/sites, care units, and individual informants. Residual materials were reviewed as a means of validation to determine whether any items not included could have contributed further explanations. A printed summary of the themes was sent to participants for validation.

Data from the open-ended questions on the surveys. Directed content analysis was conducted on the open-ended survey questions with the same procedures (Hsieh & Shannon, 2005; Miles & Huberman, 1994) and the same codebook used for the interview data. The coding of the textual survey responses was integrated with the interview coding to ensure that the themes identified were as comprehensive as possible. This complementary material proved very helpful in identifying commonalities across the hospital's two sites.

Data from documentary sources. Summaries of identified documentation were prepared and entered into a grid based on our theoretical framework. The grid was examined in relation to the other qualitative data to complement and augment the development of explanatory themes (Yin, 2009).

Analytic rigor. Throughout the analysis process, we undertook a variety of strategies based on published recommendations (Morse, Barrett, Mayan, Olson, & Spiers, 2008; Onwuegbuzie & Leech, 2007; Yin, 2009) to ensure the rigor of the analysis and the quality of the results. Strategies included insuring sampling adequacy, systematic process of coding, concordance search in triangulation of data, validation of preliminary interpretations by informants, and interpretation of results in light of the theoretical model for analytic generalization.

To integrate the inferences from the two phases of our study, the regression analyses in Phase 1 were used as a starting point for explanations that were then explored in greater depth from the perspectives of different informants, in light of the theoretical propositions on structure and process of the Quality-Caring Model©. We were thereby able to assess support across complementary data sources (Erzberger & Kelle, 2003) for anticipated or assumed relationships between organizational climate and nurses' caring practices.

Results

Description of Sample and Study Variables

The 292 participants' characteristics are reported in Table 1. Ninety percent were female, and only 28.9% held a baccalaureate degree (reflecting education levels of RNs in the province of Quebec). The nurses worked in 24 care units. We grouped these units into five categories: critical care (emergency room, dialysis, and intensive care: 29.5% of nurses), medicine (22.2%), surgery (20.8%), psychiatry (14.0%), and other assignments such as float teams or on-call staff (13.5%). Of the respondents, 38.4% reported caring only for conscious patients in the 2 weeks preceding the survey, with the remainder estimating that unconscious patients represented between 1% and 24% of their caseloads.

Table 1. Survey Participants' Sociodemographic Characteristics ($N = 292$)

Characteristics	*M*	*SD*
Age (years)	40	10.8
Years of experience		
As a nurse	15	10.8
At current hospital	14	10.1
At current clinical position	9	8.6
Characteristics		**Percentage**
Highest qualifications		
College diploma		65.6
Bachelor's degree		28.9
Other type of graduate studies (certificate, MSc)		5.5
Full-time employment		51.0
Shift worked		
Day		48.6
Evening		32.8
Night		17.9
Rotation		0.7
Area of clinical practice		
Critical care (emergency room, dialysis, and intensive care)		29.5
Medicine		22.2
Surgery		20.8
Psychiatry		14.0
Other assignments		13.5

Nurses generally assessed overall organizational climate as moderately positive (Table 2). The job dimension relating to autonomy, respondents' perceptions of the importance of their work, and the feeling of being challenged at work was rated positively. Role perceptions (personal workload, role clarity, and role-related conflict), ratings of manager leadership, and work groups were significantly more negative, hovering around the midpoint of the scale, with organization ratings slightly below this midpoint of 2.5.

Caring practices were regularly performed; mean scores were either slightly above or well above the 2.5 midpoint of a 5-point scale. The subscale scores clearly indicated, however, that although relational care elements were often carried out, they were less frequent than clinical or comfort care.

Table 2. Nurses' Responses to Organizational Climate Scale and Self-Rated Frequency of Performance of Caring Practices ($N = 292$)

Scale and Subscales (Possible Range)	*M*	*SD*	Observed Range
Organizational Climate			
Overall rating (1–5)	3.13	0.56	1.75–4.67
Job (1–5)	4.01	0.49	1.94–5.00
Role (1–5)	2.99	0.66	1.17–4.67
Leadership (1–5)	2.93	0.89	1.00–5.00
Work group (1–5)	3.36	0.88	1.08–5.00
Organization (1–5)	2.36	0.74	1.00–4.67
Caring Practices			
Overall rating (1–5)	3.62	0.66	1.95–5.00
Clinical care (1–5)	4.02	0.57	2.44–5.00
Relational care (1–5)	2.90	1.01	1.00–5.00
Comforting care (1–5)	4.08	0.72	1.67–5.00

Organizational Climate as a Statistical Predictor of Nurses' Caring Practices

The control variables of clinical practice area or specialty and caring for unconscious patients together explained 14% of the variance in the frequency of caring practices across respondents ($\Delta F\,(5, 292) = 9.58$, $p < .0001$; Table 3).). After overall organizational climate scores were added to the models, the only control variable that remained a significant predictor was psychiatry as the area of clinical practice ($\beta = 0.68$, $p < .0001$), indicating that psychiatric nurses reported a higher frequency of caring practices than those in other specialties.

Associations between organizational climate and its dimensions and overall caring behaviors were then examined. The overall organizational climate score added 11% to the explained variance in the nurses' performance of caring practices explained by the model (Table 3). When entered in separate regression models, each climate dimension was a significant predictor of caring behaviors and added 5–9% of explained variance to the model consisting of control variables alone (Table 4). When all subscales of organizational climate were entered simultaneously, only the role dimension was a significant predictor of caring practices (Table 4). Thus, the strongest predictor of performance of caring practices by nurses was their perception of their role; a balanced workload without role conflict or ambiguity was associated with higher frequency of self-reported caring practices.

Qualitative Evidence on Organizational Climate's Role in Caring Practices

Results of the first phase supported the theoretical propositions of the Quality-Caring Model© but offered two divergent explanations of the effect of organizational climate on nurses' performance of caring practices: (a) a significant effect of each organizational climate dimension; and (b) a stronger effect of the role dimension than the overall climate construct. The quantitative analysis of direct-care RN reports of organizational climate and caring practices did not incorporate perspectives of other nursing team members. The second phase of the study supported both explanations and revealed them to be complementary. The qualitative analysis revealed a system dynamic wherein the role dimension was a single predominant factor, yet was also the result of complex interaction of the other dimensions of organizational climate.

For informants, workload was the component of organizational climate that most strongly influenced nurses' actual caring practices, but each organizational climate-related explanatory theme interacted with the others to promote or constrain nurses' caring practices. The qualitative phase also identified new explanatory themes. For example, respondents' reports revealed the influence of the individual characteristics of patients (and their families) and of nurses themselves and highlighted the phenomenon of

Table 3. Organizational Climate as Predictor of Nurses' Frequency of Caring Practices in Hierarchical Multiple Regression Analysis ($N = 292$)

Predictors	ΔR^2	ΔF	*B*	*SE B*
Step 1 (Control)	0.14	9.58***		
Specialty[a]				
Medicine			0.08	0.12
Surgery			0.15	0.10
Other areas			0.16	0.12
Psychiatry			0.68***	0.14
Unconscious patients in caseload			−0.13	0.10
Step 2	0.11	16.25***		
Overall organizational climate rating			0.43***	0.07
Total R^2	0.25			

[a]Reference category: Critical care.
***$p < .0001$.

Table 4. Organizational Climate Factors Predicting Nurses' Self-Rated Frequency of Performing Caring Practices in Separate and Combined Multiple Regression Analyses ($N = 292$)

	Separate Regression Models				Simultaneous Entry in Single Model			
Predictor	R^2	F	B	$SE\ B$	R^2	F	B	$SE\ B$
					0.26	9.97***		
Job	0.19	10.91***	0.28***	0.07			0.08	0.08
Role	0.23	14.24***	0.33***	0.06			0.19*	0.07
Leadership	0.21	12.89***	0.21***	0.04			0.07	0.06
Work group	0.19	11.14***	0.17***	0.04			0.04	0.05
Organization	0.22	13.05***	0.27***	0.05			0.09	0.07

Note. All parameter estimates and standard errors calculated after controlling for area of clinical practice and presence of unconscious patients in nurses' caseloads. (R^2 for this base model: 0.14.)

*$p < .01$.

***$p < .0001$.

collaborative caring, wherein RNs' caring practices were delegated, shared or taken on by other members of the nursing team. Informants' perceptions of organizational climate varied by clinical area and practice site, but opinions from the six different groups of informants converged in analysis. However, as described below, the main site informants' perceptions were noticeably more negative than those of staff in the smaller psychiatric site.

Four themes depicting elements of organizational climate added to the Phase 1 results to explain nurses' performance of caring practices: (a) workload; (b) team approach and nurses' role; (c) attributes of nurses' managers and the organization; and (d) specific characteristics of patients, patients' families, and nurses. These are described below; Table 5 illustrates each.

Workload. Respondents consistently identified workload as the most critical influence on nurses' caring practices. Due to heavy task burden and workload, often attributed to staffing shortages, nurses often either performed caring practices perfunctorily or embedded caring practices within technical tasks that provided opportunities for interaction with patients. Informants from the main site described unmanageable workloads that forced them to multitask and compelled them to prioritize their activities or even to drop some tasks altogether (such as patient teaching, comfort care or therapeutic relationship-building). Many respondents also said coordination of care and paperwork consumed time that nurses would have liked to spend with patients and families. Coordination of care was work associated with the admission and discharge of patients (which was heightened when patients moved in and out of settings quickly), and paperwork could include documentation of patient care, requisitioning material or medication, developing nursing care plans, or other forms of note-taking that respondents perceived as onerous and/or redundant.

Team approach and nurses' role ambiguity. Nurses' workloads could be exacerbated or mitigated by some aspects of team functioning. Harmony, cooperation, and role clarity, together and separately, were considered essential to nurses' performance of caring practices.

In the context of heavier workloads, however, collaboration between team members was sometimes reduced to nurses' monitoring patients through nursing assistants without actually supervising or coordinating the monitoring, to the detriment of nurses' performance of caring practices. Roles for RNs with junior/community college preparation versus baccalaureate-level nursing degrees also differed, due to job title distinctions in Quebec, some job classifications, and collective agreements. While graduates of both programs had the same legal scope of practice, nurses with baccalaureate degrees were more frequently assigned supervisory and training roles, so their functions were viewed as involving more paperwork than hands-on care or caring practices.

Some respondents described team functioning as negatively affected when other professionals on interdisciplinary teams did not consider nurses' opinions or recognize their independent involvement in caring practices. Especially on medicine and surgery units, role ambiguity and conflict led nurses to delegate caring practices to other members of the team or resulted in other team members simply taking over caring practices (Table 5).

Attributes of the nurses' managers and of the organization. Both managers and non-managers noted the impact of front-line nurse managers' leadership in communicating priorities to staff regarding caring practices. Nurse managers who promoted caring practices acknowledged the time nurses and other team members invested with patients, sometimes demonstrating the value assigned to it by attending to workload concerns raised by team members. Managers' presence, respect, and openness were also cited as role modeling that promoted caring practices. Many informants, however, were skeptical that managers had sufficient power and organizational influence to obtain the resources necessary to promote nurses' caring practices. Virtually all respondents believed that at the

Table 5. Themes, Subthemes, and Examples From Qualitative Interviews on Role of Organizational Climate in Nurses' Caring Practices

Theme and Subthemes	Examples
Workload • Nursing shortage • Work organization with available resources • Unmanageable workload • Prioritization pressures	"I think the workload is heavier because you have fewer personnel for heavy cases requiring a higher level of care." "Say a person is crying because they've just found out about their cancer. Well, you won't skimp on your work with them, but you might not provide as much time as you would've liked to, either."
Team approach and nurses' role • Team work cooperation • Nurses' role confusion • Nurses' role in interprofessional collaboration • Substitution of others for nurses	"If everybody's arguing with everybody else, there's no harmony at the nurses' station. Patients will get pushed around or will get snarky answers, and then it's 'Goodbye! See you later! I'm outta here!' If everything is going well, it's cool, and the patients get that feeling too." "… Teaching is often done by the LPN … but the RN should be doing it."
Attributes of the managers and of the organization • Personal characteristics of the managers • Power and communication • Organizational justice and support • Recognition by administration of nurses' caring expertise •Pressure for organizational efficiency	"Well, if the charge nurse spreads the word that it's important and I in my role as resource nurse [clinical coach] also say it's important to support families, well, then they [the staff] get coached. It makes them feel better and it puts them on the right track. (…) When the manager gets involved—well, I find that it can help the situation because she acts as a role model." "They [staff assigned by a manager] don't have the training to take care of ultra-specialized surgical clients just like that. It's as if they sent a woman who had just given birth and was experiencing complications to the oncology unit. It's not obvious that the RNs would know what to do or what not to do to take care of her."
Characteristics of patients, families, and nurses • Health condition of the patient • Patient/family demands and personal characteristics • Generational attitude and experience • Personality and mood of care provider • Ability to engage fully in interactions	"Of course, when clients are confused, they can get aggressive. It takes a lot more time to care for those people than to care for a cognitively intact patient." "I don't know about new RNs … I don't want to bad-mouth anyone. I don't know if caring practices are actually that important, I get the impression that it's [care] a lot more slapdash than it used to be."

institutional level, inequitable distribution of staffing and other resources, lack of support, and communication difficulties had negative impact on nurses' performance of caring practices.

Specific characteristics of patients, patients' families, and nurses. Informants were nearly unanimous in stating that the characteristics of patients and their families were inextricably linked to the influence of the organizational climate on nurses' caring practices. The clinical profiles of patients, patients' beliefs and cultural practices, the acuity of their needs, and the demands and requests of patients and their relatives all had effects on care practices, not only directly due to their impact on caring demands but also indirectly by influencing perceptions of workload. Some respondents suggested that nurses' ages and professional experience and the personalities of particular nurses and other team members also contributed to differences in their performance of caring practices. Young nurses, for example, might respond to workload with a hurried approach to caring practices. More experienced nurses might respond to accumulated frustrations on the job with emotional detachment or might be more able to adapt to situations and respond to needs.

Summary of contributions of the qualitative results. The first three explanatory themes revealed how organizational climate dynamics affected collaborative caring practices within the context of the nursing team (RNs, LPNs, and nursing care assistants). Respondents had difficulty defining RNs' proper role in specific nursing practices involving interacting with patients. Many seemed to reduce independent nurse caring to "chatting with patients;" at the same time, they reported that interdisciplinary team members (physicians and other health professionals) devalued RNs' independent contributions to caring practices. Ambiguity about their own professional role, coupled with heavy workload, led nurses to limit their caring practices, particularly on medicine and surgery units. Caring practices that traditionally fell solely within the professional nurse's scope of practice (e.g., monitoring of the patient's physical and mental condition, development of a clinical teaching plan for the patient and family) were assumed by unregulated personnel (such as aides and orderlies) or practical nurses who were not educated to the same extent or accountable for the same level of performance of these responsibilities.

Discussion

To our knowledge, this is the first study to explore linkages between organizational climate and nurses' performance of caring practices in hospitals both quantitatively and

qualitatively. Overall, the findings were consistent with links identified in the Quality-Caring Model© (Duffy & Hoskins, 2003) between the subjective reality of organizational life and nurses' caring relationships. Each dimension of organizational climate predicted the frequency of caring practices, but when all dimensions were taken into account in simultaneous regression analysis, characteristics of nurses' roles (e.g., their workloads, role conflict, and role clarity) independently predicted caring practices. Together, the quantitative and qualitative results suggest nurses' perceptions of workload are the most prominent factor influencing caring practices. They also imply that leadership, teamwork linked to role ambiguity for nurses, and organizational characteristics along with specific characteristics of patients/families and nurses may have distinct and systemic influences on RNs' caring.

Our results complement earlier findings by Aiken et al. (2001) and Kalisch et al. (2009), who reported that high proportions of nurses left care tasks undone and omitted nursing care and that, under time pressure, relational care practices, including emotional support and teaching, were among the elements of care most often dropped. Our quantitative results, however, indicated that nurses still regularly carried out caring practices despite a generally negative perception of their work environment, which is consistent with Schubert et al.'s (2008) findings that most types of care were rarely rationed. Nevertheless, even infrequent rationing of care has been linked to negative patient outcomes (Schubert, Clarke, Glass, Schaffert-Witvliet, & De Geest, 2009).

Although several authors have declared caring as a core element of nursing (Newman, Smith, Pharris, & Jones, 2008; Watson, 1988), most did not consider it professional nursing's exclusive domain. Our Phase 2 results revealed that some caring practices that draw upon professional nursing knowledge were carried out by practical nurses and nursing care assistants. Others also have found that as disciplinary boundaries between health professionals are redefined (Nancarrow & Borthwick, 2005), auxiliary health workers are performing functions that were once the responsibility of RNs (McKenna et al., 2004). Discounting the distinctive knowledge that guides RNs' performance of caring practices can impede optimal care planning and coordination with other nursing team members.

The literature suggests that RNs feel great role strain regarding both independent and collaborative caring practices. Nearly two decades ago, Clifford (1995) described a phenomenon called "care by proxy" (p.39). A number of trends and forces explain its apparent rise in recent years. Today's RNs' greater supervisory functions and responsibility for complex technical care (Potter, Deshields, & Kuhrik, 2010) decrease RNs' opportunities to engage in relational care and increase the likelihood that caring is done at arm's length and through others. As boundaries between the work of RNs and related occupations continue to evolve, it is critical for clinicians, leaders, and researchers to consider the implications of role structure and workload for caring and its ultimate impact on quality of care and outcomes.

In this study, careful attention was paid to the integrity of both the qualitative and quantitative data (Creswell & Plano Clark, 2011; Morse et al., 2008; Tabachnick & Fidell, 2006; Yin, 2009). The study nonetheless had limitations, most of which concern the psychometric properties of the instruments and the potential influence of extraneous variables. First, as noted earlier, the validity of grouping the 15 subscales of the CRISO-PCQ into five scales could not be confirmed by factor analysis, given the sample size. Second, findings from the shortened form of the CNPISS that was used would be strengthened by additional data from nurses working in hospital settings to demonstrate convergence between self-reports and external data sources. Third, we could not control for certain potentially confounding variables, perhaps most importantly the emotional and physical condition of the patients cared for by the respondents. Although we controlled for patients' levels of consciousness, caring practices are shaped by many other patient and family characteristics (Duffy & Hoskins, 2003; Finfgeld-Connett, 2007) that were not controlled quantitatively. We did explore them in the second phase of the study and identified influential factors related to patient types, intensity of care needs, family demands, and cultural beliefs and habits.

Fourth, although the response rate to our survey was relatively high (45%), debate continues regarding acceptable response rates in health services research (Kramer, Schmalenberg, Brewer, Verran, & Keller-Unger, 2009), and although we believe our respondents and their experiences are reflective of nurses in Quebec and elsewhere where similar nursing practice models are in place, the results here are from a single healthcare organization.

Our analysis was conducted at the individual level due to the small number of subjects in several of the units; these results need to be replicated elsewhere using a multilevel framework. Finally, as is common in organizational research in nursing, we did not examine patient outcomes and thus could not determine the extent to which caring practices met patients clinical and health needs.

Conclusion

Researchers repeatedly have shown a link between resource adequacy and nurses' perceptions of quality of care (Friese, 2005; Hinno et al., 2011; McCusker et al., 2004). Here we extend this work to nurse caring practices, a specific aspect of care performed by nurses. Our results suggest that although characteristics of nurses' roles (including workload) had the strongest association with the frequency of nurses' performance of caring practices, other aspects of organizational climate also are important, and an understanding of these dimensions is vital to a dynamic understanding of organizational climate that will support the development of systems interventions (Shamian & El-Jardali, 2007). Researchers should take patient-related variables into account in evaluating care delivery models. It

is important to clarify the nurse's role vis-à-vis the patient in relation to roles of other members of the healthcare team (McKenna et al., 2004; Potter et al., 2010).

As settings for nursing practice evolve, the nursing profession will need to find new ways to maintain the quality of care and services (Quality Worklife—Quality Healthcare Collaborative, 2007; Woolf, 2004). In a context in which nurse shortages and budget cuts have driven a rethinking of care models and experimentation with staff mix in many institutions, and legislated scopes of nursing practice have changed in a number of jurisdictions (White et al., 2008), RNs' roles in interacting with patients must be recognized and strengthened without compromising either quality of care or nurses' well-being and professional satisfaction (Roch, 2008). Finally, optimal organizational climates appear to be those in which not only are workloads lighter but where teamwork is optimal and professional nurses have articulated and embraced a clear role for themselves. Leadership decisions that create such climates promote nurses' performance of essential caring practices and help to ensure safe, patient-centered services.

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