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Association of the Nurse Work Environment with Nurse Incivility in Hospitals

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Abstract

Aim—To determine whether nurse coworker incivility is associated with the nurse work environment, defined as organizational characteristics that promote nurse autonomy.

Background—Workplace incivility can negatively affect nurses, hospitals, and patients. Plentiful evidence documents that nurses working in better nurse work environments have improved job and health outcomes. There is minimal knowledge about how nurse coworker incivility relates to the United States nurse work environment.

Methods—Quantitative, cross-sectional. Data were collected through online surveys of registered nurses in a southwestern United States health system. Survey content included the National Quality Forum-endorsed Practice Environment Scale of the Nursing Work Index and the Workplace Incivility Scale. Data analyses were descriptive and correlational.

Results—Mean levels of incivility were low in this sample of 233 staff nurses. Incivility occurred “sporadically” (mean =.58; range 0.00 to 5.29). The nurse work environment was rated highly (mean = 3.10; range of 1.00 to 4.00). The nurse work environment was significantly inversely associated with coworker incivility. The nurse manager qualities were the principal factor of the nurse work environment associated with incivility.

Conclusions—Supportive nurse managers reduce coworker incivility.

Implications for Nursing Management—Nurse managers can shape nurse work environments to prevent nurse incivility.

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Keywords

Registered nurse; hospital; work environment; nurse leadership; workplace incivility

Introduction

Workplace incivility is an ongoing problem for hospital nurses across the globe in countries such as the United States (U.S.), Australia, Canada, and New Zealand (D'Ambra & Andrews 2013, Danque *et al.* 2014). Workplace incivility is defined as "the occurrence of low intensity behavior exhibiting an ambiguous intent to harm" (Andersson & Pearson 1999, p. 457). In the U.S., one staff nurse sample exhibited a high coworker incivility prevalence which was associated with lost productivity (Smokler Lewis & Malecha 2011). Other evidence has suggested that nurse incivility may have compromised patient safety and care quality (Laschinger 2014). Nearly 8 in 10 Canadian nurses reported nurse incivility in one sample, which was associated with decreased job satisfaction and organizational commitment (Laschinger *et al.* 2009). The nurse work environment may influence incivility prevalence. The nurse work environment is defined as "the organizational characteristics of a work setting that facilitate or constrain professional nursing practice" (Lake 2002, p. 178). Nurse work environments are a modifiable (Kutney-Lee *et al.* 2013) variable across hospitals (Lake & Friese 2006), and may serve as a mechanism for nurse managers to reduce coworker incivility and its harmful consequences.

Background

Over the last decade, coworker incivility has been a target of U.S. healthcare accreditation and nursing professional bodies. The Joint Commission, a U.S. accrediting body which certifies health care organizations that meet performance quality standards (Joint Commission 2017), published a sentinel event alert about the consequences of "disruptive behaviors", a broad category or behavior that includes workplace incivility (Joint Commission 2008). Concerns about coworker incivility prompted a national position statement in the U.S. to provide guidance on how to prevent and address coworker incivility (American Nurses Association [ANA] 2015). Coworker incivility examples among nurses are "…discourteous actions, gossiping, spreading rumors, refusing to assist a coworker, name-calling, and public criticism" (ANA 2015, p. 2). The ANA recommends that nurses should intervene when incivility occurs to facilitate healthy professional working relations within the nursing profession and health care team (ANA 2015). The position statement enumerates many recommendations for managers to reduce the prevalence of incivility and the harms it causes (ANA 2015, Clark 2009).

Consequences of coworker incivility for patients, nurses and hospitals have been documented. In a study of 370 physicians, nurse, and staff members, disruptive behaviors were linked to adverse events by 32.8% of respondents (Rosenstein & Naylor 2012). Coworker incivility has also been associated with nurse-assessed adverse events and poor patient safety perceptions (Laschinger 2014). Consequences of coworker incivility for nurses include poor mental and physical health (Read & Laschinger 2013), and nurse burnout

(Spence Laschinger et al. 2009). Disruptive behaviors observed among physicians and nurses in the perioperative setting have provoked stress, frustration, and concentration loss (Rosenstein & O'Daniel 2006). Consequences of coworker incivility for hospitals include lost productivity (Smokler Lewis & Malecha 2011), nurse intention to leave a position (Oyeleye *et al.* 2013, Laschinger *et al.* 2009), nurse absenteeism, turnover, and reduced organizational commitment (Felblinger 2009). Smokler Lewis and Malecha (2011) found that failure to address nurse workplace incivility costs hospitals 11,581 U.S. dollars per nurse per year due to lost productivity.

Researchers have examined organizational factors that contribute to or reduce incivility. Contributing factors include hierarchical management, high stress, and conflicting loyalties between the staff and patient needs (Clark *et al.* 2011, Felblinger 2009). Positive organizational characteristics such as authentic leadership and structural empowerment are associated with reduced coworker incivility (Read & Laschinger 2013). Hospitals recognized for nursing excellence, i.e., the Pathway to Excellence Program® and Magnet Recognition Program® (American Nurses Credentialing Center [ANCC] 2017) have less incivility than comparison hospitals (ANCC 2017, Smokler Lewis & Malecha 2011). One recent study conducted in Japan found an association between the nurse work environment and nurse workplace bullying (Yokoyama *et al.* 2016). Bullying is a disruptive behavior similar to coworker incivility. Our study adds to nursing science because we explored the nurse work environment with coworker incivility; thus, we augment what is known broadly about disruptive behaviors.

We theorize that the nurse work environment is the organizational context for coworker incivility. The nurse work environment has five conceptual domains, which are (1) nurse manager ability, leadership, and support of nurses, (2) staffing and resource adequacy, (3) nurse participation in hospital affairs, (4) nursing foundations for quality of care, and (5) collegial nurse-physician relations (Lake 2002). Researchers have found that the nurse work environment affects odds of patient death and failure to rescue (Aiken *et al.* 2011a), missed nursing care (Jones *et al.* 2015), patient satisfaction (Aiken *et al.* 2012, Kutney-Lee *et al.* 2009), and nurse burnout (Aiken *et al.* 2011b). One U.S. study compared incivility in Magnet and non-Magnet hospitals (Smokler Lewis & Malecha 2011). Research to date has not explored how the nurse work environment or its domains might be associated with coworker incivility in the U.S.

Among the five nurse work environment domains, three were conceptualized as applicable to the nursing unit level (Lake 2002): (1) nurse manager ability, leadership, and support of nurses, (2) staffing and resource adequacy, and (3) collegial nurse-physician relations. The current inquiry focused on the first two domains as potential antecedents to coworker incivility because they are within the purview of nursing. Of note, several sources indicate hospital nurse managers have difficulty assuming their role. Nurse managers perceive their role as stressful (Kath *et al.* 2013, Shirey *et al.* 2013) and within a "neglected middle" (McLarty & McCartney 2009, p. 74). The ability of nurse managers to function effectively and recognize coworker incivility as compared to overt harassment (Skarbek *et al.* 2015) is critical to address the problem of coworker incivility. However, nurse managers find it difficult to define, evaluate, and address coworker incivility (Skarbek *et al.* 2015, Gilbert *et*

al. 2016). Staffing and resource adequacy, another nurse work environment domain, may influence incivility through the increased stress and conflict produced when staff and resources are insufficient (Clark *et al.* 2011).

Given that coworker incivility is a problem for patients, nurses, and hospitals, (D'Ambra & Andrews 2013), and one that managers are not effectively recognizing and addressing (Gilbert *et al.* 2016), a study of the relationship between the nurse work environment and coworker incivility is warranted.

Aims and objectives

This study addresses the minimal knowledge in the U.S. about the association between the nurse work environment and nurse incivility. The study aims were to 1) describe nurse incivility frequency in a multihospital U.S. sample, and 2) measure the association of incivility with nurse work environment factors within nursing's purview at the unit level, namely nurse staffing adequacy and nurse manager effectiveness. Although the nurse work environment includes more than inter-nurse relationships, understanding how factors such as nurse manager leadership and nurse staffing and resource adequacy might contribute to workplace incivility can help nurse managers address this problem.

The study question was: What are the relationships between the nurse work environment, particularly the nurse manager ability, leadership, and support of nurses, and staffing and resource adequacy with coworker incivility among registered nurses working in hospitals?

Methods

Conceptual framework

Donabedian's structure-process-outcome model was used to frame this study. Structures are "…the relatively stable characteristics of the providers of care, of the tools and resources they have at their disposal, and of the physical and organizational settings in which they work" (Donabedian 1980, p. 81). Nurse work environment factors were the hospital structures studied. Processes are "activities that constitute healthcare" (Donabedian 2003, p. 46) and "… norms [that] govern interpersonal processes" (Donabedian 1980, p. 80). Coworker incivility is a negative process possibly resultant from hospital structures. In Donabedian's model, outcomes are changes, either desirable or undesirable, that occur from the individuals' healthcare system experience (Donabedian 2003). Outcomes were not studied; however, this study explores the relationship between structures and processes before making a link to patient-level outcomes.

Study design

The study design was quantitative, correlational, and cross-sectional. The researchers used a convenience sample of hospital nurses who agreed to participate in an online survey distributed through email. The necessary sample size was calculated using power estimates for two predictors in multiple regression (Soper 2015). With a small anticipated effect size of 0.05, the target sample size was at least 194 to achieve a power level of .80. A small estimated effect size was selected to be conservative in our expectations. This ensured that

enough data were collected to detect a meaningful association among variables. The sample inclusion criteria was being a registered nurse.

Variables and measures

Coworker incivility—Coworker incivility among registered nurses was measured using the Workplace Incivility Scale (WIS) (Cortina *et al.* 2001) with previously tested modified question instructions to address specific peer-to-peer registered nurse coworker incivility (Laschinger *et al.* 2014). This is a valid and reliable 7-item measurement tool with a previously established Chronbach's alpha of 0.89 (Cortina *et al.* 2001). The Chronbach's alpha for the WIS in this study was 0.91. The question stem was "During the previous month, have you been in a situation where any registered nurse coworker:" and the items are displayed in Table 2. The frequency response scale of coworker incivility experiences allows seven responses ranging from never to daily: (0) never, (1) sporadically, (2) now and then, (3) regularly, (4) often, (5) very often, and (6) daily (Cortina *et al.* 2001, Laschinger *et al.* 2014). Hypothetical mean scores range from 0–6. Higher scores indicate a higher prevalence of perceived workplace incivility (Laschinger *et al.* 2014). Due to this variable's right-skewed distribution, in regression models we tested original as well as a square root transformation. Results were similar. The original scores were used to simplify interpretation.

Nurse work environment measures—Nurse work environment factors were measured using the Practice Environment Scale of the Nurse Work Index (PES-NWI). The PES-NWI is a 31-item measurement tool to measure nurse work environment dimensions based upon magnet hospital philosophies. This is a widely-used, valid, and reliable measurement tool (Aiken *et al.* 2011b, Lake 2002, Warshawsky & Havens 2011). The previously established Chronbach's alpha score for the composite PES-NWI is 0.84 (Lake 2002); for this study, the Chronbach's alpha score was 0.94. The question stem reads, "Please indicate the extent to which you agree that the following items are present in your current job." The Likert responses were scored: (1) strongly disagree, (2) disagree, (3) agree, and (4) strongly agree. Hypothetical mean scores range from 1–4. Higher scores indicate greater agreement that organizational characteristics are present (Lake 2002). The PES-NWI includes five reliable and valid subscales (1) nurse manager ability, leadership, and support of nurses, (2) nurse staffing and resource adequacy, (3) nursing foundations for quality of care, (4) nurse participation in hospital affairs, and (5) collegial nurse-physician relations. The subscales have from 3 to 10 items and their Chronbach's alphas exceeded .80 (Table 3).

In regression models, this variable was standardized to simplify the interpretation of results. A standardized independent variable yields an effect size that occurs given a one standard deviation change.

Demographics—Questions about participant age, gender, unit specialty, education level, employment status, and years of experience in the hospital unit were included.

Sampling and data collection

The convenience sample was recruited from 5 acute care hospitals within one U.S. Southwestern healthcare system. Of these 5 hospitals, 3 were ANCC Magnet® designated facilities and 2 were in the ANCC Pathway to Excellence Program®. The Magnet® program recognizes healthcare organizations for quality patient care and nursing excellence (ANCC, 2017). The Pathway to Excellence Program recognizes healthcare organizations for a commitment to creating a positive nursing practice environment (ANCC, 2017). The sampling frame included approximately 3500 staff registered nurses responsible for direct inpatient care within these 5 hospitals. Participants were recruited through an email invitation to take an online survey. Data were collected from November 2015 to December 2015.

Ethical considerations

Institutional Review Board (IRB) approval was obtained from the principal investigator's institution and the hospital system. We used Qualtrics Survey Software to provide surveys and collect data. We did not collect IP addresses. One non-nurse, non-managerial employee was given permission to send email invitations to eligible registered nurses. Therefore, a power-differential did not exist between the survey distributer and potential participants. Participants received a study description at the beginning of the survey. Participation was voluntary. Participation by taking the survey served as informed consent. The IRBs waived signed consent based on the low risk for participation.

Data analysis

Sample distribution for coworker incivility was assessed for normality using the Shapiro Wilk statistic. Descriptive univariate analyses were conducted to describe sample characteristics. Scatterplot as well as correlational and linear regression analyses were used to understand how the nurse work environment related to coworker incivility. This was done in three models: (1) nurse manager ability, leadership, and support of nurses as an independent variable to predict coworker incivility, (2) staffing and resource adequacy as an independent variable to predict coworker incivility, and (3) nurse manager ability, leadership, and support of nurses and staffing and resource adequacy, in the same model, predict coworker incivility. Estimated scores for workplace incivility were found using prediction analysis to further understand how nurse work environment factors influence coworker incivility. Data were analyzed using Stata 14.2.

Results

Sample characteristics

Of all hospital staff RNs recruited, 283 participants responded to the survey. The estimated response rate was 8.1% for approximately 3,500 potential staff registered nurse participants. Seven nurses did not meet inclusion criteria and were omitted. The incivility or PES-NWI data were incomplete for 43 respondents, who were omitted from the analyses. The final analytic sample was 233 nurses. In this sample, 43% of nurses reported two years of experience or less. The largest fraction of the sample (35%) were 30 years of age or less

(Table 1). The most frequent age reported was 26. Most nurses were female (93%) and worked in either a medical surgical or critical-progressive care unit. Most held at least a Bachelor's degree (74%) and were employed full time (Table 1).

Coworker incivility

For coworker incivility, the mean scale score was 0.58 (SD = 0.79; range = 0 – 5.29) (Table 2). The average participant reported either "never" or "sporadically" experiencing coworker incivility.

Nurse work environment

The nurse work environment composite measure had a mean score of 3.10 across all participants (Table 3). The subscale scores ranged from 2.92 for staffing and resource adequacy, to 3.23 for nursing foundations for quality of care. Scores close to 3 indicate participants "agree" that the desirable characteristics are present.

Relationship between coworker incivility and nurse work environment

Positive nurse work environment perceptions were inversely correlated with incivility ($r = -0.42$, $p < .01$) (Table 3 and Figure 1). In a bivariate linear regression model (Table 4), an increase of 1.00 in the standardized practice environment score (SD = 1) was associated with a .33 lower incivility score ($p < .01$). The nurse work environment composite score explained approximately 17% of the variance (r^2) for coworker incivility.

Both practice environment subscales were likewise inversely correlated with incivility. In a bivariate regression model, more positive assessment of nurse manager ability, leadership, and support of nurses was associated with .30 lower incivility and explained 14% of the variance in incivility. In an additional bivariate regression model, a more positive assessment of staffing and resource adequacy was associated with .23 lower incivility and explained 8% of the variance in incivility.

In a joint model with both practice environment subscales, the nurse manager ability, leadership, and support of nurses subscale remained significant with a coefficient of −.43, while the staffing and resource adequacy subscale was not significant. In Table 5, estimated predictions of coworker incivility decreased incrementally when leadership and staffing were perceived more positively at percentage cut points (i.e. 25%, 50%, and 75%).

Discussion and implications for nursing management

We were motivated to see if the nurse work environment may be an avenue to address coworker incivility. In a sample of registered nurses from five hospitals, we found that the nurse work environment was significantly related to coworker incivility. A one standard deviation increase in the practice environment composite score was linked with nearly a half SD (.42) lower incivility. Thus, the environment had a clinically meaningful association with incivility. Our results show that both nurse manager ability, leadership, and support of nurses and staffing and resource adequacy are potential avenues to address coworker incivility.

Our sample's mean scores for nurse coworker incivility were similar to those of a Canadian sample, indicating that incivility occurs "sporadically"(Laschinger *et al.* 2014). However, we found wide variability of coworker incivility scores among nurses. Although average prevalence was low, some nurses reported high levels of coworker incivility. Targeted intervention studies to improve the work environment for nurses affected by coworker incivility would advance nursing science. Nurse managers should develop methods to identify nurses affected by coworker incivility who could benefit from coping strategies, such as cognitive rehearsal (ANA 2015).

The nurse work environment exhibited in this sample was favorable on average. Our sample's PES-NWI composite score of 3.10 was on the higher end of the spectrum that ranged from 2.48 to 3.17 as reported in a review of 22 studies (Warshawsky & Havens 2011). This study augments the extensive predictive validity of the PES-NWI (Warshawsky & Havens 2011) by demonstrating the significant association with incivility in a U.S. sample.

About one-third of the nurse sample was less than 31 years of age, which is lower than the registered nurse population average. According to data from the U.S. Department of Health and Human Services, only 9.6% of nurses across the U.S. are 30 years of age or under (Health Resources and Services Administration, 2013). Additionally, our sample had more nurses educated at the BSN level (75%) than was reported from a large random sample of nurses from four U.S. states (45%; $n = 39,148$) (Aiken *et al.* 2011b). The large proportion of less experienced nurses aged 31 or less at the BSN-education level in our sample likely reflects the demographics of hospitals with nursing accreditation.(McHugh *et al.* 2013) Hospitals face unique retention challenges with new to practice nurses. Newly licensed registered nurses with an average age of 27 who experience coworker incivility reported poorer mental health (Laschinger *et al.* 2013). Workplace incivility is a significant predictor of low job satisfaction in graduate nurses transitioning into practice (D'Ambra & Andrews 2013).

Nurse managers' efficacy to positively affect the nurse work environment is a concern, given the stress (Shirey *et al.* 2013) nurse managers face. Nurse managers must reconcile their own challenges while attempting to improve work conditions for bedside nurses. To ease the challenges nurse managers face, hospital administrations should have clear policies and procedures for nurse managers to address coworker incivility (Hoffman & Chunta 2015). Policies should delineate the meaning of "zero-tolerance" and managerial action required to address coworker incivility (Hoffman & Chunta 2015). Hospital organizations could provide resources for nurse managers such as focus group forums with other nurse managers to identify shared solutions to problems. Such collaboration could help large hospitals with many patient care units improve the overall nurse work environment across the hospital.

Ensuring adequate nurse staffing and resources should be a priority of hospital administration globally to decrease coworker incivility among staff nurses who are vital to functioning hospitals and are the primary drivers for quality patient care. Hospital administrations should support nurse managers in monitoring, evaluating, and addressing

staffing and resource adequacy as an strategy to decrease coworker incivility among bedside registered nurses.

Our findings are consistent with Donabedian's model in that hospital outcomes are a function of both structures and processes. The nurse work environment, as a hospital structure, is associated with coworker incivility as a process that is worth investigating in terms of how it might affect hospital outcomes.

The significant results in this study warrant replication in a larger, more representative sample. In addition, a study to improve nurse manager effectiveness should include before-and-after measures of coworker incivility. Whether hospitals with nursing accreditation achieved lower coworker incivility through better work environments could be investigated in a comparative research design. Consequences of coworker incivility for patients warrant continued investigation.

Limitations of the study

The cross-sectional study design limits causal inference. This study was conducted in hospitals with Magnet and Pathway to Excellence designations. Results may not generalize to hospitals without these designations. Same-source bias, i.e., the dependent and independent variables being reported by the same person, might have influenced the results. Although response rate was low, the sample provided reliable data on study concepts. The low response rate could have been due to survey fatigue, as nurses in Magnet hospitals have many survey opportunities. This study was sufficiently powered to discern significant relationships.

Conclusion

Nurse coworker incivility occurs sporadically on average but varies considerably across nurses. Nurse manager leadership, ability, and support of nurses and nurse staffing and resource adequacy are critical in shaping nurse work environments that ultimately drive better nurse outcomes, such as decreased coworker incivility. Nurses' work environments warrant the attention of hospital administrators to achieve civil workplaces where nurses can focus on patient care.

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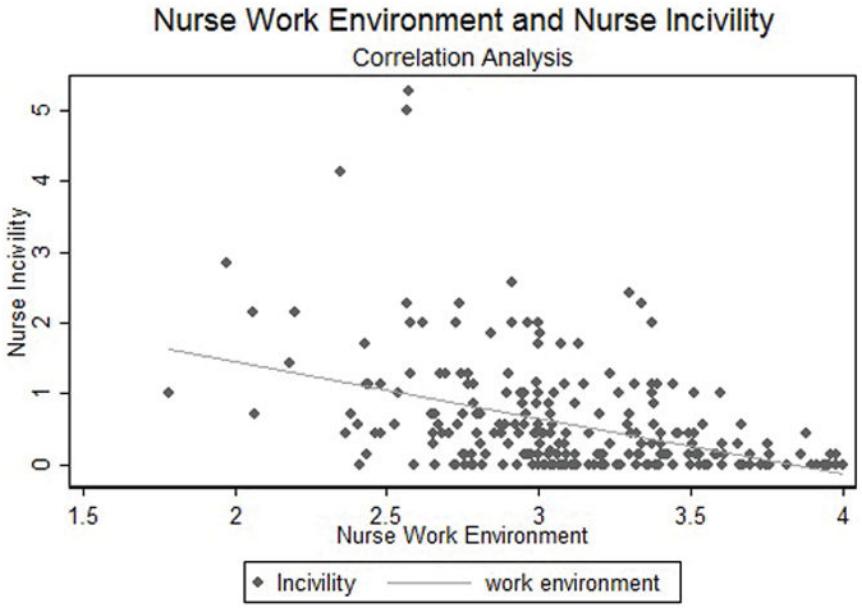

Figure 1.
Correlation of Nurse Work Environment and Nurse Incivility

Table 1

Nurse characteristics

Characteristics	n (%)
Age (*n* = 173)	
20–25	22 (13)
26–30	38 (22)
31–40	44 (25)
41–50	35 (20)
51–75	34 (20)
Gender (*n* = 233)	
Male	17 (7)
Female	216 (93)
Unit Specialty (*n* = 233)	
Critical/Progressive Care	64 (27)
Medical Surgical	58 (25)
Mother-Baby	33 (14)
Perioperative	27 (12)
Emergency	15 (6)
Oncology	15 (6)
Other, Unspecified	13 (6)
Transplant	8 (3)
Education Level (*n* = 233)	
Diploma	3 (1)
Associate	43 (18)
Bachelor	173 (74)
Master	14 (6)
Employment Status (*n* = 233)	
Full Time	217 (93)
Part Time	10 (4)
Per Diem	6 (3)
Years of Experience (*n* = 218)	
<1	26 (12)
1–2	68 (31)
3–5	39 (18)
6–10	40 (18)
11–15	22 (10)
16–20	12 (6)
>20	11 (5)

Table 2

Summary of Coworker Incivility Items and Scale

	N	Mean	Std. Dev.	Min.	Max
Item 1					
Put you down or was condescending to you?	233	0.81	1.13	0	5
Item 2					
Paid little attention to your statement or showed little interest in your opinion?	229	0.88	1.10	0	5
Item 3					
Made demeaning or derogatory remarks about you?	232	0.46	0.93	0	5
Item 4					
Addressed you in unprofessional terms, either publicly or privately?	231	0.42	0.85	0	5
Item 5					
Ignored or excluded you from professional camaraderie?	230	0.47	0.94	0	6
Item 6					
Doubted your judgment on a matter over which you have responsibility?	233	0.56	0.95	0	6
Item 7					
Made unwanted attempts to draw you into a discussion of personal matters?	233	0.47	0.92	0	6
Coworker Incivility Mean Score	233	0.58	0.79	0	5.29

Table 3

Relationships between the Nurse Work Environment and Coworker Incivility

	N	Mean	Std. Dev.	Min.	Max	Number of Items	Chronbach's Alpha	*r*
PES-NWI Composite	233	3.10	.42	1.78	4	31	0.94	−0.42**
Nurse Manager Ability, Leadership, and Support	233	3.12	.58	1	4	5	0.85	−0.38**
Staffing and Resource Adequacy	233	2.92	.57	1.25	4	4	0.83	−0.29**
Nurse Participation in Hospital Affairs	233	3.07	.50	1.33	4	9	0.86	−0.42**
Nursing Foundations for Quality of Care	233	3.23	.40	2.1	4	10	0.84	−0.35**
Collegial Nurse-Physician Relations	233	3.14	.53	1	4	3	0.85	−0.26**

** significant at $p < .01$

r refers to the correlation coefficient for the relationship between coworker incivility and PES-NWI mean scores and PES-NWI subscale mean scores

Table 4

Linear regression beta coefficients between coworker incivility and nurse work environment (*N*=233)

Incivility	**Model 1**	**Model 2**	**Model 3**	**Model 4**
	b, CI	*b*, CI	*b*, CI	*b*, CI
PES-NWI composite	−.33 ** (−.42, −.24)			
Nurse Manager Leadership		−.30 ** (−.40, −.21)		−.25 ** (−.46, −.18)
Staffing and Resource Adequacy			−.23 ** (−.32, −.13)	−.09 (−.25, .03)

Note.

** $p < 0.01$ Model 1: incivility regressed on standardized PES-NWI composite mean; Model 2: incivility regressed on leadership; Model 3: incivility regressed on staffing; Model 4: incivility regressed on leadership and staffing.

b refers to beta coefficients for the regression of coworker incivility on PES-NWI mean scores and PES-NWI subscale mean scores

Table 5

Estimated scores of coworker incivility by levels of Nurse Manager Leadership and Staffing and Resource Adequacy

	Staffing and Resource Adequacy by cut point %		
	25	**50**	**75**
Nurse Manager Leadership by cut point %	**Incivility Score**		
25	0.79	0.71	0.67
50	0.70	0.62	0.58
75	0.44	0.36	0.32