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Assess Relationship between Nursing Practice Environment and Nurses' Psychological Empowerment

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ABSTRACT

Background: The nursing practice environment plays a critical role in influencing both the quality of patient care and nurses' job satisfaction, retention, and well-being. A positive work environment, characterized by structural empowerment, is essential to prevent nurse burnout and improve patient outcomes. This study examines the relationship between nurses' perceptions of their work environment, as measured by the Practice Environment Scale of the Nursing Work Index (PES-NWI), and their psychological empowerment, as assessed by the Psychological Empowerment Instrument (PEI). Understanding this relationship is crucial for improving both nurse performance and patient care.

Methods: A secondary analysis was conducted using cross-sectional data from a two-year survey of 7,849 nurses . The PES-NWI, a validated tool to assess the work environment, and the PEI, a scale measuring psychological empowerment, were used. Descriptive statistics, Cronbach's alpha, Pearson's correlation, and multilevel analysis (hierarchical linear models) were employed to explore the relationship between the PES-NWI scores and PEI scores, controlling for demographic factors such as age, sex, educational background, and years of experience.

Results: A total of 2,438 valid responses (31.1% valid response rate) were analyzed. The results revealed a significant positive relationship between the overall PES-NWI score and the PEI total score ($r = 0.16–0.25$, $p < 0.001$). Multilevel analysis confirmed that a supportive work environment, as indicated by higher PES-NWI scores, was positively associated with greater psychological empowerment (coefficient range: 0.33–0.72, $p < 0.001$).

Conclusion: The findings indicate that a positive nursing practice environment, characterized by structural empowerment, is a key factor in enhancing psychological empowerment among nurses. This relationship underscores the importance of fostering a supportive work environment to improve nurse job satisfaction, retention, and ultimately, patient outcomes. Nursing managers should prioritize strategies that strengthen the work environment to empower nurses and enhance their engagement and effectiveness in clinical settings.

Keywords: ultimately, patient, environment, Psychological.

INTRODUCTION

The nursing practice environment encompasses the organizational factors within a healthcare setting that either support or hinder professional nursing practice (1). The quality of this environment significantly affects patient care and outcomes (2,3,4,5,6), as well as nurses' job satisfaction (7,8), intentions to stay in their roles (7), and turnover rates (8). A positive work environment and effective supervisory support are recognized as essential resources to prevent nurse burnout (9,10). Thus, it is crucial from a nursing management perspective to establish an organizational structure that actively supports nurses and sustains high standards of patient care, as this approach promotes both the quality of the nursing practice and patient outcomes.

In response to a nursing shortage in the United States during the early 1980s, certain hospitals known for maintaining safe patient care and successfully attracting and retaining nurses became known as magnet hospitals, distinguished by specific organizational strengths (11,12,13). The Magnet Recognition Program® by the American Nurses Credentialing Center evaluates these work environments, highlighting structural empowerment as a key factor in their success (12,13,14). The Practice Environment Scale of the Nursing Work Index (PES-NWI), derived from the Nursing Work Index (NWI), captures these core characteristics of magnet hospitals and is widely used to assess nursing work environments (1). Studies have found that healthier work environments are linked to higher job satisfaction and retention among nurses (7,8). A previous study conducted by this research team, known as the WENS-J project, employed the PES-NWI to investigate how nurses' perceptions of their work environment influence nursing outcomes, finding that higher PES-NWI scores correlated with more positive outcomes across units (15).

Psychological empowerment, a concept closely related to nursing performance, is defined by Thomas and Velthouse (16) as a form of intrinsic motivation that includes four key dimensions: meaning, competence, self-determination, and impact (17). In this context, “meaning” reflects the alignment of an employee’s values with their work; “competence” refers to their belief in their ability to accomplish tasks effectively; “self-determination” involves the autonomy to make choices about their work; and “impact” indicates the degree to which they feel they can influence workplace outcomes (17,18). Spreitzer developed the Psychological Empowerment Instrument (PEI) in 1995 to measure these dimensions, and it has since been widely used to assess empowerment among employees worldwide (17,19,20,21). Psychologically empowered employees are more motivated, have greater potential for growth, and contribute to the overall effectiveness of an organization (22). Empowered nurses, as studies suggest, deliver higher quality care (23), demonstrate greater engagement (24), and can foster empowerment in their patients as well (25). For nursing managers, understanding and fostering psychological empowerment is likely to improve both staff satisfaction and patient outcomes.

Structural empowerment—seen as a foundation for psychological empowerment—is also central to the magnet hospital model (10,26). However, few studies have specifically investigated the relationship between structural empowerment, as indicated by PES-NWI scores, and psychological empowerment in the nursing field. Moreover, there has been limited research on the connection between each of the five PES-NWI subscales and psychological empowerment as a marker of a supportive work environment. Some studies have examined aspects of this relationship but did not include all subscales. For instance, Wang (24) looked at the influence of the nursing practice environment (using PES-NWI composite scores) and psychological empowerment on nurses' work engagement, while Cho (27) examined the relationship between three PES-NWI subscales, psychological empowerment, and nurses' views on patient activation, which ultimately contributed to both patient and nurse well-being, allowing nurses to exercise greater decision-making autonomy. These findings highlight the importance of fostering a supportive practice environment and psychological empowerment among nurses. Creating a healthy work environment that enables nurses to maintain their well-being and perform effectively is an urgent and essential issue in healthcare management .

This study conducted a secondary analysis using PES-NWI and PEI data from the WENS-J project (15) to test the hypothesis that a positive work environment increases psychological empowerment for nurses, with PES-NWI serving as a potential foundation for such empowerment. Specifically, the study sought to determine if a better work environment enhances psychological empowerment among nurses, examining both the total empowerment score and individual subscales to ensure practical applicability in clinical settings.

METHODS

Data Collection for the Study

This study conducted a secondary analysis using cross-sectional data from a two-year prospective survey. The survey targeted general hospitals with more than 200 beds in municipalities with populations over 200,000, which were willing to participate. University hospitals were excluded to avoid the influence of management differences in teaching hospitals. The remaining hospitals were listed in a national hospital yearbook. The survey was distributed to 7,849 nurses working across 23 hospitals. Each nurse received a survey package containing a cover letter, questionnaire, and a pre-stamped envelope for returning the completed forms directly to the researchers, ensuring anonymity and privacy. The hospitals involved had bed capacities ranging from 50 to 875, with an average of 426.1 beds. The average patient length of stay across the hospitals was between 15.4 and 15.8 days. Data collection occurred over a span of a few months.

Instruments

The questionnaire gathered demographic details such as age, sex, years of nursing experience (including time at the current hospital), educational background, employment status (full-time or part-time), and any additional roles related to leadership, teaching, training, or research. Two established scales were used for data collection: the version of the Practice Environment Scale of the Nursing Work Index (PES-NWI) and the Psychological Empowerment Instrument (PEI).

The PES-NWI is a validated scale that measures various aspects of nurses' work environments based on characteristics found in high-performing hospitals. It assesses managerial support, nurse involvement in hospital operations, nurse-physician relationships, and quality care promotion. The version of the PES-NWI has been validated and consists of 31 items across five subscales: (1) Nurse Participation in Hospital Affairs, (2) Nursing Foundations for Quality of Care, (3) Nurse Manager Support and Leadership, (4) Staffing and Resource Adequacy, and (5) Collegial Nurse-Physician Relations. Respondents rated their work environment on a 4-point Likert scale from strongly agree to strongly disagree, with subscale and composite scores calculated based on the average ratings. Higher scores reflected stronger magnet hospital traits.

Psychological empowerment was assessed using the PEI, a 12-item scale based on empowerment theories. The PEI includes four subscales: meaning, competence, self-determination, and impact, each measured by three items. Responses ranged from "strongly disagree" to "strongly agree" on a 7-point Likert scale. Subscale scores were computed as the mean of the three items, with higher scores indicating greater psychological empowerment. The overall PEI score was derived from averaging the subscale scores.

Data Analysis

Descriptive statistics were used to summarize respondents' demographic characteristics, including frequencies, percentages, means, and standard deviations. Internal consistency of the PES-NWI subscales and the PEI scores was evaluated using Cronbach's alpha coefficients. As the data for the independent and dependent variables came from the same respondents, Harman's one-factor test was applied to minimize common method bias. Pearson's correlation coefficient was calculated to explore relationships between PES-NWI scores, PEI scores, and subscale measures. Given that motivational factors may be influenced by variables such as age and years of experience, multilevel analysis (hierarchical linear models) was conducted to account for confounding factors like age, sex, experience, education level, and additional roles, as well as data clustering. The PEI total score served as the dependent variable, with PES-NWI subscales and composite scores entered into six separate models. Statistical significance was determined at a threshold of $p < .05$. All analyses were performed using JMP® statistical software.

Ethical Considerations

The study was approved by an institutional review board. Respondents were provided with written information about the study's purpose and voluntary participation. Informed consent was obtained from all participants to ensure their willingness to take part in the survey.

RESULTS

A total of 7,849 nurses were surveyed, with 3,166 responding (response rate: 40.3%). After excluding incomplete responses, 2,438 valid responses (31.1% valid response rate) were included in the analysis. The mean age of respondents was 33.7 years (SD 8.9, range: 20–67), with 93.7% (2,285) identifying as female. The average length of service at their current hospital was 6.5 years (SD 7.0, range: 0–49). The majority of participants (92.7%) were employed full-time, and 73.3% held staff positions without additional assigned roles. In terms of education, 17.9% of respondents had a bachelor's degree or higher, while 82.1% did not. Harman's one-factor test revealed that the first factor contributed only 25.1%, indicating a low likelihood of common method bias.

Cronbach's alpha coefficients for the PES-NWI composite score was 0.82, with subscales ranging from 0.85 to 0.89. The PEI total score had an alpha of 0.83, with subscales ranging from 0.88 to 0.90. The PES-NWI composite score averaged 2.58 (SD 0.39), with the highest score for "Nurse Manager Ability, Leadership, and Support of Nurses" (2.76, SD 0.59) and the lowest for "Staffing and Resource Adequacy" (2.27, SD 0.55). The PEI total score was 3.83 (SD 0.85), with the highest score for the Meaning subscale (4.48, SD 1.02) and the lowest for the Impact subscale (2.98, SD 1.15).

Spearman's correlation analysis revealed a range of correlation coefficients between 0.08 and 0.84 ($p < 0.001$). Prior to the multiple regression analysis, weak positive correlations were found between the total PEI score and subscale scores with the composite PES-NWI score ($r = 0.16–0.25$, $p < 0.001$).

After adjusting for demographic factors such as age, sex, educational background, employment status, length of service, and additional assigned roles, a significant positive relationship was found between the PEI total score and the PES-NWI composite score, as well as with all subscales (coefficient range: 0.33–0.72, $p < 0.001$). Multicollinearity checks indicated no issues, as all Variance Inflation Factors were below 10.

Table 1. Respondents' characteristics and work background ($n = 2,438$).

		Mean	**SD**	**Range**
Age		33.7	8.91	20–67
Total years in current hospital		6.5	6.98	0–49
		n	**%**	

Gender			
Male		153	6.3
Female		2,285	93.7
Bachelor's degree			
Yes		436	17.9
No		2,002	82.1
Employment status			
Full-time		2,261	92.7
Part-time		177	7.3
Additional assigned role[a]			
Yes		650	26.7
No		1,788	73.3

[a]Additional assigned role at respondents' hospital related to team leadership, teaching, training, and research. SD = standard deviation.

Table 2: Univariable Statistics and correlations among Composite score; PEI and PES-NWI items (n = 2,438).

	Items	**Mean**	**SD**	**Cronbach's alpha**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
	PEI													
1	Meaning	4.48	1.02	0.90										
2	Competence	3.87	1.01	0.88	0.50									
3	Self-determination	3.99	0.99	0.88	0.47	0.57								
4	Impact	2.98	1.15	0.89	0.38	0.58	0.60							
5	Total score	3.83	0.85	0.83	0.69	0.82	0.81	0.84						
	PES-NWI													
6	Nurse Participation in Hospital Affairs	2.59	0.42	0.85	0.21	0.11	0.22	0.19	0.22					
7	Nursing Foundations for Quality of Care	2.66	0.39	0.85	0.23	0.12	0.23	0.15	0.22	0.71				
8	Nurse Manager Ability, Leadership, and Support of Nurses	2.76	0.59	0.87	0.21	0.08	0.23	0.12	0.19	0.58	0.54			
9	Staffing and Resource Adequacy	2.27	0.55	0.88	0.16	0.10	0.21	0.14	0.18	0.46	0.49	0.46		
10	Collegial Nurse–Physician Relations	2.63	0.56	0.88	0.21	0.10	0.17	0.09	0.16	0.45	0.51	0.38	0.33	
11	Composite score	2.58	0.39	0.82	0.26	0.13	0.27	0.18	0.25	0.80	0.81	0.78	0.72	0.70

Spearman's rank correlation coefficients, p-values < 0.001. PEI = Psychological Empowerment Instrument; PES-NWI = Practice Environment Scale of the Nursing Work Index.

DISCUSSION

This study involved a secondary analysis of data from the WENS-J project (15), a large-scale longitudinal study exploring the relationship between the nursing practice environment and nursing outcomes, such as nurses' performance, health, and satisfaction. To the best of the authors' knowledge, this is the first empirical examination of the relationship between work environment characteristics, based on the PES-NWI subscales of magnet hospitals, and psychological empowerment as a nursing outcome in general hospitals.

The authors hypothesized that a healthy work environment would lead to increased nurses' psychological empowerment. After adjusting for potential confounding factors such as demographic and job-related characteristics, the results showed a significantly weak but positive correlation between the PES-NWI and PEI scores. This finding supports the hypothesis, aligning with previous research (24), suggesting that work environments resembling those outlined in the PES-NWI can contribute to nurses' psychological empowerment. The analysis of PES-NWI and PEI subscales indicates that these indicators are specific and applicable in clinical practice.

While direct comparisons with earlier studies are limited due to differences in tabulation methods, the PEI scores in this study ranged from 2.98 to 4.48 points, which were lower than the 5–6 point range reported in studies on U.S. clinical nurses (32,33). The higher PEI scores in the U.S. may be attributed to factors such as the older age of the sample, the higher proportion of nurses with baccalaureate degrees, and the availability of professional development opportunities (33). In contrast, nurses in this study were younger (average age 33.7 years), had fewer bachelor's degrees (17.9%), and were less likely to hold additional roles such as leadership or teaching. It is conceivable that as nurses age and accumulate more experience, their roles and empowerment scores may increase. The PES-NWI, a hallmark of magnet hospitals, encourages nurse participation in hospital affairs, which may increase psychological empowerment if successfully implemented.

In a recent study on part-time nurses , PEI scores ranged from 3.06 to 4.85 points (34), similar to the findings in this study. The highest score was in the "meaning" dimension, while the lowest was in the "impact" dimension, consistent with the results here. According to psychological empowerment theory, the "meaning" dimension reflects the alignment between a nurse's job and their values, which may explain the high scores. Conversely, the low "impact" score suggests that nurses felt they had limited influence on organizational outcomes, possibly linked to perceptions of being undervalued by their supervisors (36).

The study revealed weak but significant correlations between PEI and PES-NWI subscales and composite scores. To foster an empowering work environment, it is essential to create a work setting like the one described in the PES-NWI. Leadership styles that are inclusive and empowering are related to psychological empowerment (37,38). Specifically, the PES-NWI subscale "Nurse Manager Ability, Leadership, and Support of Nurses" emphasizes the importance of leadership in empowering nurses. Previous research has indicated that organizational justice, which involves fair evaluation and decision-making involvement, is crucial for psychological empowerment (39). The "Nurse Participation in Hospital Affairs" subscale reflects the importance of nurses' involvement in policy decisions and career development.

The study found that nurses working in environments with strong magnet hospital characteristics were more likely to experience empowerment. This supports the hypothesis that nurses in magnet hospitals feel more empowered. Additionally, nurses in these environments report higher job satisfaction, lower burnout (40,41), and reduced turnover rates (42) compared to nurses in non-magnet hospitals. Empowered nurses are better able to empower their patients, leading to improved health outcomes (25). As such, promoting a work environment aligned with magnet hospital characteristics appears to be an effective strategy for enhancing nurse empowerment. Nursing managers should incorporate empowerment strategies to improve nurses' satisfaction with their work environment. This is reflected in the highest PES-NWI subscale score, "Nurse Manager Ability, Leadership, and Support of Nurses," which highlights the importance of strong nurse-manager relationships. However, the "Nurse Participation in Hospital Affairs" subscale scored relatively low in this study, emphasizing the need for senior nursing leadership to prioritize shared governance and quality of care standards.

A positive relationship between structural and psychological empowerment has been well-documented (36,43), and this study's findings suggest that improving the work environment using the PES-NWI can lead to better nurse outcomes (44). Healthcare managers can use the PES-NWI to evaluate their nursing practice environment and identify areas for improvement. Additionally, empowerment is crucial in crisis situations, such as pandemics (45), making this study's results a valuable resource for future research.

However, this study has some limitations. First, the cross-sectional design limits the ability to infer causality (46). Second, the study focused on general hospitals with over 200 beds in urban areas, limiting the generalizability of the findings to all hospitals . Despite this, it provides useful baseline data for future research. Third, the response rate of 40.3% introduces the possibility of sampling bias. Fourth, cultural differences that could influence nurses' perceptions of empowerment and job satisfaction were not examined (47). Finally, while the survey was conducted in 2014, the results remain relevant as a reference point for future research, particularly as a baseline prior to the COVID-19 pandemic.

CONCLUSION

This study demonstrates that a positive, healthy work environment can enhance nurses' psychological empowerment. These findings contribute to building a supportive work environment that fosters high-quality nursing care and offers a potential resource for developing environments that promote better nursing outcomes.

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