

# Satisfaction With the Quality Nursing Work Environment Among Psychiatric Nurses Working in Acute Care General Hospitals

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## ABSTRACT

**Background:** The objective of this study was to investigate the impact on patient care quality of a positive, high-quality environment that is tailored to the practice of nursing. This study enabled nurses to show their professional skills and knowledge, which may help enhance job satisfaction. To date, little research has been done to assess the relationship between the nursing work environment and the job satisfaction of psychiatric nurses employed in acute wards of general hospitals.

**Purpose:** This study was designed to explain the relationship between job satisfaction and the perceived indicators of a quality nursing work environment (QNWE) after adjusting for demographic characteristics and work characteristics.

**Methods:** A cross-sectional correlational design was employed, and a stratified random sample of 185 psychiatric nurses (99% response rate) working in acute wards in Taiwan was surveyed in 2013. Nurses were asked to complete a self-administered questionnaire that included measures of perceived QNWE and job satisfaction and demographic variables.

**Results:** A statistically significant, positive relationship was found between perceived indicators of QNWE and job satisfaction ( $r = .813, p < .001$ ). In the hierarchical multiple linear regression model, for the subdimensions of QNWE, the variables "perceived indicators of professional specialization and teamwork" and "support and caring" showed a significant and positive association with job satisfaction, after adjusting for personal demographic characteristics.

**Conclusions/Implications for Practice:** Job satisfaction is related to the perception of nurses regarding their work environment. Therefore, nursing managers should improve workplace satisfaction by supporting and caring for nurses and creating better career development and teamwork opportunities for nurses through job training and planning.

## KEY WORDS:

job satisfaction, nursing work environment, psychiatric nurse, organizational support, teamwork.

shortages and high rates of turnover have become issues affecting the nursing profession in many countries (Marć, Bartosiewicz, Burzyńska, Chmiel, & Januszewicz, 2019). Although the reasons for these shortages are varied and complex, key reasons include unhealthy work environments and poor organizational climates, which characterize many workplaces today (International Council of Nurses, 2007). In recent decades, many countries have restructured, reorganized, and reengineered their healthcare systems, and as a result, positive work environments for healthcare delivery have become an important and powerful factor affecting nurses in clinical practice (Hinno, Partanen, Vehviläinen-Julkunen, & Aaviksoo, 2009). A positive environment for nursing practice leads to higher quality patient care (Ward, 2011), may enable nurses to show their professional skills and knowledge (Currie, Harvey, West, McKenna, & Keeney, 2005), and may foster self-actualization in nurses (Burtson & Stichler, 2010). A further effect of a positive environment is an improved sense of job satisfaction (Lu, Barriball, Zhang, & While, 2012). Finally, a positive work environment may help increase employee retention in a current workplace (Al-Hamdan, Manojlovich, & Tanima, 2017). Previous studies have found a negative relationship between job satisfaction and intent to leave (Alsarairh, Quinn Griffin, Ziehm, & Fitzpatrick, 2014; Baum & Kagan, 2015). In addition, job satisfaction has been found to mediate the relationship between organizational commitment and intent to leave. Thus, for nurses, job satisfaction is associated with greater organizational commitment, reducing the percentage of nurses expressing intent to leave

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## Introduction

Nurses are a critical part of the healthcare system and make up the largest segment of the healthcare workforce. However,

the current workplace (Shacklock, Brunetto, Teo, & Farr-Wharton, 2014).

A positive work environment has been defined as a work setting in which nurses are able to achieve organizational goals and to derive personal satisfaction from their work (Lin, Lu, & Huang, 2016). Managerial strategies designed to reduce the negative effects of organizational complexity on employee productivity, work quality, and retention have emerged in a variety of industries and settings. Recent research has focused on “Magnet hospitals” because of their reputation for good work environments, success in attracting and retaining qualified nurses, and improved patient outcomes (Friese, Xia, Ghaferi, Birkmeyer, & Banerjee, 2015). In the Magnet Recognition Program of the American Nurses Credentialing Center, which identifies hospitals that epitomize nursing excellence, using a win-win strategy for nursing and hospitals was highlighted as an effective approach to achieving collaboration among healthcare institutions (Centrella-Nigro et al., 2015); in other words, nursing managers must be able to create work situations that are assertive and cooperative with each other. Interest is growing regarding the perceptions of nurses toward their work and work environment to address current and potential future nursing workforce-related problems (Friese et al., 2015). As a result, understanding nurses' perceptions of their work and work environment is critical to effective management. It is important to note associations among burnout, job satisfaction, and work environment (Khamisa, Oldenburg, Peltzer, & Ilic, 2015). Research findings have linked burnout in nurses to several specific work environment factors, including high workload, poor collegial support, sense of coherence, and overall work-environment quality (Hanrahan, Aiken, McClaine, & Hanlon, 2010; Levert, Lucas, & Ortlepp, 2000). Moreover, prolonged exposure to stressful work environments diminishes job satisfaction (Khamisa et al., 2015).

## Background

The qualities of a positive nursing environment identified in previous studies include the leadership attributes of nursing administrators (e.g., vision and responsiveness), professional attributes of staff nurses, and support provided for professional practice, including regard for nurse autonomy and control over practice, ability to establish and maintain nurse–patient and collaborative nurse–physician relationships, and nurses' perceptions of empowerment (Budge, Carryer, & Wood, 2003; Harwood et al., 2007; Kieft, de Brouwer, Francke, & Delnoij, 2014). Schmalenberg and Kramer (2008) identified eight key indicators of a quality work environment and provided guidance on how to improve the unit-work environment. Furthermore, the research team involved in this study previously developed a list of indicators for a quality nursing work environment (QNWE), with eight dimensions and 65 items that are associated with the indicator data collected by the American Nurses Association (Lin et al., 2016). Nurses working in QNWEs are encouraged to provide patients with excellent nursing care (International Council of Nurses, 2007). Although a QNWE increases job

satisfaction for nurses (Lu et al., 2012), empirical evidence indicates the need for continued improvement. However, nurses in different countries may hold different perceptions of what constitutes quality in the work environment (Lu et al., 2012).

Previous studies have investigated the essential qualities for nurses in the hospital environment, and other work has investigated important aspects of a healthy work environment and nurses' work experiences (Budge et al., 2003; Milisen, Abraham, Siebens, Darras, & Dierckx de Casterle, 2006). However, few studies have concentrated on the perceptions of psychiatric nurses regarding their work environment (Gardner, Thomas-Hawkins, Fogg, & Latham, 2007). Although the psychiatric nursing shortage persists and the number of individuals with mental health issues and psychiatric disorders increases, empirical data on psychiatric nurses' perceptions regarding the quality of nursing work environments in acute inpatient care are scarce. Psychiatric nursing is a stressful occupation, with potential effects on the health and job satisfaction of care providers (Alsaraireh et al., 2014). One qualitative study indicated that job satisfaction in the psychiatric workplace might influence the retention rate of nurses who work in mental health services (Ward & Cowman, 2007).

Minimal research has assessed the relationships among elements in the nursing work environment and job satisfaction in psychiatric nurses employed in acute wards. Moreover, to the knowledge of the investigative team, the correlation between perceived QNWE and job satisfaction adjusted for personal characteristics among psychiatric nurses in Taiwan is a topic rarely considered in the literature. Therefore, this study was designed to fill a gap in understanding regarding psychiatric nursing in Taiwan and provide critical information to human resource managers.

The aims of this study were as follows: (a) to explore the perceived QNWE from the perspective of psychiatric nurses using a nationwide survey, (b) to compare the differences in perceived indicators of QNWE between two groups of nurses with different levels of job satisfaction, and (c) to explain the relationship between job satisfaction and the perceived indicators of QNWE after adjusting for demographic and work characteristics. The researchers hypothesized that the perceived indicators of QNWE affect the job satisfaction of psychiatric nurses after adjusting for the demographic characteristics of age, gender, marital status, and level of nursing education.

## Methods

### Sample

This study used a correlational cross-sectional design. The formulation of 95% with a minimum effect size of 0.15 for 11 predicting factors, *p* values at .05 significance, and a sample size of 178 were calculated based on a power analysis for partial correlation and linear multiple regression analyses. This study included 185 participants, with an initial distribution of 188 surveys (response rate: 99%), representing

14.21% of the entire population of registered nurses working in the acute psychiatric care wards of general hospitals in Taiwan. Approximately 48.25% of registered nurses in Taiwan work in acute psychiatric care (Ping, Hsieh, & Chou, 2008).

Inclusion criteria used in this study were a nursing license, full-time employment in an acute psychiatric ward at a hospital for at least 6 months, and age between 20 and 60 years. Exclusion criteria included student nurses, nurse assistants, and qualified nurses working in specialized care settings in a community rehabilitation center.

## Data Collection

The Taiwan Nurses Association used a stratified random sampling method to conduct a nationwide survey under the authority of the Taiwan Ministry of Health and Welfare. Stratified random sampling ensured that a representative sample of psychiatric nurses in all hospitals was obtained. The research team constructed the study framework using existing healthcare delivery systems guidance and the accreditation policy of the National Ministry of Health and Welfare (Wu, Majeed, & Kuo, 2010). Study participants were selected in three steps. First, stratified random sampling was conducted to select the hospitals by tier. Next, a second round of stratified random sampling selected acute psychiatric wards. Finally, after obtaining permission from the selected hospitals, survey questionnaires were distributed to participants, who placed the completed forms in self-addressed, stamped envelopes to be returned to the researchers by the designated representative at each hospital. Four academic medical centers, nine metropolitan hospitals, and 12 district hospitals participated in this survey. The target population consisted of registered nurses employed by acute care institutions, principally because this sector of the nursing profession has been the most severely affected by the nursing shortage. The target population was chosen from a multistate sample and selected to represent specific nursing and demographic characteristics.

## Ethical Considerations

Ethics approval was obtained from both the university and the hospitals involved in this study (TMU-JIRB No. 20130738). All respondents received written and verbal information regarding the study's aims and its contents. Study participation was voluntary. Completed research packets were collected daily and secured in a locked file. Data were analyzed anonymously, and the results were not traceable to individual participants.

## Data Analysis

All of the data were analyzed using IBM SPSS Statistics v.19.0 (IBM, Inc., Armonk, NY, USA). Descriptive analyses included frequencies and percentages for categorical variables and means and standard deviations. For continuous variables, two independent sample *t* tests were used for normally distributed data to compare the differences between the two groups. Analysis of the Spearman rank order correlation was utilized to examine

the relationships between job satisfaction and the QNWE total score and QNWE subscores. The significant factors were included in hierarchical multiple linear regression to further ascertain their associations with job satisfaction, after adjusting for demographic characteristics and work experience. Statistical significance was defined as  $p < .05$ , with the probability of a Type I error of .05.

## Measures

The three instruments included in the self-administered questionnaire respectively measured the perceived indicators of QNWE, job satisfaction, and demographics.

### **Indicators of a quality nursing work environment**

The indicators of QNWE, developed by the Taiwan Union of Nurses Association, were designed to measure nurses' perceptions of their working environment (Lin et al., 2016). The Cronbach's alpha value for the entire scale was .90. Validity was examined based on expert review of content validity and content validity indices, with the latter ranging from .83 to 1 for all dimensions. In addition, exploratory factor analysis was used for factor extraction. Principal component analysis was used to find the initial factor solution and factor rotation and to check for varimax. After the exploratory factor analysis, the final version of the QNWE metric included eight dimensions and 65 items, with 77.57% of the total variance explained. The reliability estimate for the QNWE metric was .91. The eight dimensions encompassed by the QNWE were as follows: a safe practice environment (16 items), quality and quantity of staff (four items), salary and welfare (seven items), professional specialization and teamwork cooperation (seven items), work simplification (five items), informatics (five items), career development (nine items), and support and caring (12 items). The indicators for each item were selected based on their suitability using a 5-point Likert scale, with scores ranging from 1 = *totally unqualified* to 5 = *fully qualified*. A higher score on the scale indicated greater perceived nursing work environment quality (Lin et al., 2016). The reliability of the QNWE metric possessed excellent internal consistency in this study, with a Cronbach's alpha value of .93.

### **Job satisfaction**

Job satisfaction focuses on the feelings that people have with regard to their work environment. A single item, based on a prior study (Yoder, 1995), was used to assess the job satisfaction of the participants in this study. This item was scored on a 5-point scale, ranging from 1 = *very dissatisfied* to 5 = *very satisfied*. The average value for job satisfaction was used to divide the participants into two groups, including the "satisfied" group (score range: 3–5) and the "dissatisfied" group (score range: 1–2).

### **Demographic variables**

The first section of the questionnaire included a demographic datasheet and questions pertaining to hospital tier (academic

medical hospital, regional hospital, and district hospital), hospital geographic area, administrative position (years in nursing work and job title) at the current hospital, and length of professional nursing experience (10 years was used as the cutoff point). Personal characteristics such as age, gender, marital status, and nursing education were considered.

## Results

### Participant Characteristics, Perceived Quality of Nursing Work Environment, and Job Satisfaction

One hundred eighty-five questionnaires were collected. Most participants were female (90.8%), more than half (57.3%) were over 31 years old, and most worked at regional hospitals (63.3%) and held the job title of registered nurse (83.2%; Table 1).

The mean score for job satisfaction was  $3.04 \pm 1.04$ . Most respondents (73.0%) reported satisfaction with their jobs, and 27.0% reported dissatisfaction.

Perceived QNWE levels were found to be statistically different across hospital tiers ( $F = 4.53, p < .05$ ), with post hoc results revealing that nurses in academic medical centers had statistically higher QNWE scores than in the other two tiers. Furthermore, a difference analysis of participants across the three hospital tiers also indicated a significant difference in the QNWE subscale (Table 2). Registered nurses reported the lowest QNWE levels, whereas managers reported the highest QNWE levels, based on mean scores ( $t = 2.84, p < .01$ ). The results of the descriptive analyses included means and standard deviations of job satisfaction among different sociodemographic variables. However, a significant difference in job satisfaction was found based on marital status ( $t = 3.15, p < .01$ ) and years of nursing experience ( $t = 2.75, p < .01$ ); participants with

**TABLE 1.**  
**Demographic Characteristics of Participants and Differences Among Variables (N = 185)**

Variable	n	%	QNWE				Job Satisfaction			
			M	SD	t	p	M	SD	t	p
<b>Demographic characteristics</b>										
Gender					-1.68	.095			-1.39	.168
Male	17	9.2	2.92	0.58			2.71	0.99		
Female	168	90.8	3.25	0.80			3.07	1.04		
Age (years)					-0.24	.807			-1.87	.063
≤ 30	79	42.7	3.20	0.70			2.87	1.03		
≥ 31	106	57.3	3.23	0.84			3.16	1.03		
Highest nursing education					1.06	.292			1.25	.210
Bachelor's degree and above	124	67.0	3.26	0.74			3.10	0.99		
Diploma degree and below	61	33.0	3.14	0.87			2.90	1.14		
Marital status					2.01*	.046			3.15**	.002
Married	73	39.5	3.36	0.82			3.33	1.00		
Single <sup>a</sup>	112	60.5	3.13	0.75			2.85	1.02		
<b>Job status</b>										
Work experience in nursing					-1.48	.140			2.75**	.007
≤ 10 years	104	56.2	3.15	0.74			2.86	0.99		
> 10 years	81	43.8	3.31	0.83			3.27	1.05		
Hospital tier					4.53*	.012			2.53	.080
Academic medical center	18	9.7	3.69	0.71			3.56	1.15		
Regional hospital	117	63.3	3.12	0.78			2.97	1.00		
District hospital	50	27.0	3.29	0.77			3.00	1.05		
Hospital geographic area					0.77	.464			0.97	.380
Northern	137	74.1	3.16	0.80			3.03	1.06		
Central	4	2.2	3.53	0.93			3.75	0.96		
Southern	44	23.8	3.29	0.72			3.00	0.96		
Job title					2.84**	.005			3.48**	.001
Manager	31	16.8	3.58	0.68			3.61	0.88		
Registered nurse	154	83.2	3.15	0.78			2.92	1.03		

Note. QNWE = quality nursing work environment.

<sup>a</sup>Includes never married, widowed, divorced, and separated.

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

**TABLE 2.**  
**Difference Analysis of the Participants at Three Hospital Tiers for Job Satisfaction and Quality Nursing Work Environment Subscale**

Item/Dimension	Academic Medical Center		Regional Hospital		District Hospital		F	p
	Mean	SD	Mean	SD	Mean	SD		
Job satisfaction	3.56	1.15	2.97	1.00	3.00	1.05	2.53	.08
Quality nursing work environment	3.73	0.69	3.12	0.78	3.29	0.77	4.53	.01
Safe practice environment	4.13	0.59	3.47	0.86	3.81	0.86	6.34	< .01
Quality and quantity of staff	3.97	0.70	3.35	0.86	3.05	0.79	8.49	< .01
Salary and welfare	3.20	1.06	2.76	1.01	2.92	1.09	1.55	.21
Professional specialization and teamwork	3.59	0.66	3.23	0.91	3.31	0.84	1.41	.25
Work simplification	3.04	1.37	2.99	1.07	3.13	1.07	0.27	.76
Informatics	4.13	0.51	2.90	0.90	3.18	0.99	15.07	< .01
Career development	3.82	0.96	3.12	0.95	3.45	0.98	5.40	.01
Support and caring	3.53	0.99	3.01	0.89	3.18	0.90	2.89	.06

fewer than 10 years of nursing experience reported lower job satisfaction levels. In addition, those with the job title of manager reported higher job satisfaction ( $t = 3.48$ ,  $p < .01$ ; Table 1).

A detailed analysis of the satisfied and dissatisfied groups showed that the satisfied group scored highly on perceived QNWE ( $t = 21.44$ ,  $p < .001$ ) and on each of the eight QNWE dimensions (Table 3).

### Perceived Quality of Nursing Work Environment and Comparisons With Different Levels of Job Satisfaction

The mean score for overall QNWE was  $3.04 \pm 1.04$  in this study, with safe practice environment receiving the highest ( $3.63 \pm 0.86$ ) and salaries and welfare receiving the lowest ( $2.85 \pm 1.04$ ) mean scores (Table 3).

### Correlation Between Job Satisfaction and Quality Nursing Work Environment Ratings

Bivariate associations between job satisfaction and the terms of perceived QNWE ratings are shown in Table 4. Significant positive correlations were found between job satisfaction and perceived QNWE ( $r = .813$ ,  $p < .001$ ). In addition, significant and positive correlations were found between job satisfaction and the eight dimensions of QNWE.

**TABLE 3.**  
**The Rank and Mean (SD) Scores for Quality Nursing Work Environment and Comparisons of Different Job Satisfaction Levels**

Item/Dimension	Mean	SD	Rank	Dissatisfaction (n = 50)		Satisfaction (n = 135)		t	p
				Mean	SD	Mean	SD		
QNWE	3.04	1.04		1.66	0.48	3.55	0.65	21.44	< .001***
1. SE	3.63	0.86	1	2.88	0.86	3.90	0.68	8.84	< .001***
2. QQS	3.33	0.86	2	2.94	0.76	3.47	0.85	3.88	< .001***
3. SW	2.85	1.04	8	1.86	0.64	3.21	0.92	11.27	< .001***
4. PST	3.28	0.87	3	2.44	0.77	3.60	0.68	9.99	< .001***
5. WS	3.03	1.10	7	2.16	0.93	3.36	0.97	7.54	< .001***
6. Info	3.10	0.96	6	2.37	0.74	3.37	0.89	7.07	< .001***
7. CD	3.26	0.98	4	2.26	0.71	3.65	0.77	11.15	< .001***
8. SC	3.21	0.90	5	2.13	0.71	3.47	0.69	11.70	< .001***

Note. QNWE = quality nursing work environment; SE = safe practice environment (16 items); QQS = quality and quantity of staff (four items); SW = salary and welfare (eight items); PST = professional specialization and teamwork (six items); WS = work simplification (five items); Info = informatics (five items); CD = career development (nine items); SC = support and caring (11 items).

\*\*\* $p < .001$ .

**TABLE 4.**  
**Correlations Between Job Satisfaction and Quality Nursing Work Environment**

Item	Job Satisfaction	QNWE	①	②	③	④	⑤	⑥	⑦	⑧
Job satisfaction	1									
QNWE	.813***	1								
① SE	.633***	.817***	1							
② QQS	.412***	.591***	.496***	1						
③ SW	.758***	.882***	.676***	.407***	1					
④ PST	.732***	.846***	.627***	.392***	.739***	1				
⑤ WS	.620***	.836***	.596***	.374***	.708***	.714***	1			
⑥ Info	.582***	.796***	.631***	.487***	.625***	.565***	.574***	1		
⑦ CD	.794***	.939***	.743***	.438***	.817***	.782***	.768***	.745***	1	
⑧ SC	.842***	.892***	.673***	.387***	.815***	.772***	.716***	.631***	.888***	1

Note. QNWE = quality nursing work environment; SE = safe practice environment (16 items); QQS = quality and quantity of staff (four items); SW = salary and welfare (eight items); PST = professional specialization and teamwork (six items); WS = work simplification (five items); Info = informatics (five items); CD = career development (nine items); SC = support and caring (11 items).

\*\*\* $p < .001$ .

### Identifying the Important Factors of Quality Nursing Work Environment Related to Job Satisfaction

To determine the extent to which demographic variables and work experience explained job satisfaction, these variables and the subdimensions of QNWE were used in a hierarchical multiple linear regression analysis that employed job satisfaction as the dependent variable. Subdimensions of QNWE (“professional specialization and teamwork” and “support and caring”) showed a significant correlation with job satisfaction levels, after adjusting for demographic characteristics (marital status) and work experience ( $t = 2.496, \beta = .203, B = .170, p < .05; t = 5.531, \beta = .592, B = .514, p < .001$ , respectively). The full regression model explained 72.9% of the overall variance related to job satisfaction ( $R^2 = .746, p < .001$ ; Table 5).

### Discussion

Participants in this study were a representative sample of psychiatric nurses from acute wards in general hospitals in Taiwan. Overall, both the perceived QNWE and job satisfaction were identified as moderate. To the best knowledge of the research team, this is the first academic examination of the correlation between perceived QNWE and job satisfaction after adjusting for demographic and work characteristics in a Taiwanese psychiatric nurse population within a general hospital setting.

In this study, participants working in academic medical centers reported better working experiences with respect to the set of indicators (safe practice environment, quality and quantity of staff, career development, support and caring) of a QNWE and reported the highest perceptions of their work environment. Wu et al. (2010) found that the characteristics

of a medical center may relate to service resources and the quality of working conditions. Medical centers in Taiwan typically have more equipment and a larger workforce available to protect the safety of patients and staff in acute care settings as well as more comprehensive continuing education programs and career advancement opportunities. This finding is similar to results in a study by Ward and Cowman (2007), who found that nurses identified teamwork and the work environment as important factors in psychiatric nursing. The hospital grouping in this study was based on the quality accreditation of the national hospital service network, which was planned according to certain criteria such as service population size, service divisions, distance, and geographical location in the healthcare system. The participants working in academic medical centers perceived a more positive nursing work environment than peers in other hospital settings. It is unclear why nurses of different experience levels have different perceptions of the nursing workforce, although the organizational attributes of the practice environment may affect these perceptions. Hanrahan et al. (2010) stated that nurses in their study perceived a better overall QNWE when factors including strong organizational support by effective managers, strong nurse–physician relationships, and higher psychiatric nurse-to-patient staffing ratios received high ratings. These factors may have a positive effect on the capacity of psychiatric nurses to sustain safe and effective patient care environments. It is important to note that, regardless of hospital type, perceived level of positive practice work environment affected perceived QNWE. For nurses who are dissatisfied and stressed because of an unhealthy environment, a positive practice environment not only affects their perception of services but also contributes to improved patient outcomes (International Council of Nurses, 2007).

The effect of current professional position found in this study, with managers reporting a higher perceived QNWE, aligns with previous research (Spence Laschinger, 2008). It

**TABLE 5.**  
**Predictors of Job Satisfaction: Hierarchical Regression Models After Adjusting for Variables**

Item	Model 1 <sup>a</sup>		Model 2 <sup>b</sup>		Full Model <sup>c</sup>	
	$\beta$	<i>p</i>	$\beta$	<i>p</i>	$\beta$	<i>p</i>
Intercept	3.809	< .001	4.451	< .001	-0.471	.306
Marital status						
Married (reference group)						
Single <sup>d</sup>	-0.481	.002	-0.331	.069	-0.058	.577
Work experience in nursing						
≤ 10 years (reference group)						
> 10 years			0.075	.691	0.098	.344
Job title						
Manager (reference group)						
Registered nurse			-0.539	.013	0.008	.950
QNWE						
1. SE					0.027	.727
2. QQS					0.088	.127
3. SW					0.135	.073
4. PST					0.203	.013
5. WS					-0.080	.191
6. Info					-0.014	.835
7. CD					0.116	.323
8. SC					0.592	.000

Note. QNWE = quality nursing work environment; SE = safe practice environment (16 items); QQS = quality and quantity of staff (four items); SW = salary and welfare (eight items); PST = professional specialization and teamwork (six items); WS = work simplification (five items); Info = informatics (five items); CD = career development (nine items); SC = support and caring (11 items).

<sup>a</sup>Adjusted  $R^2 = .046$ ,  $df = 183$ ,  $F = 9.907$ ,  $p < .001$ .

<sup>b</sup>Adjusted  $R^2 = .076$ ,  $df = 181$ ,  $F = 3.937$ ,  $p < .05$ .

<sup>c</sup>Adjusted  $R^2 = .729$ ,  $df = 173$ ,  $F = 55.656$ ,  $p < .001$ .

<sup>d</sup>Includes never married, widowed, divorced, and separated.

is likely that the registered nurse (RN) participants enjoyed greater perceptions of autonomy and control over their practice in a professional capacity. With regard to job satisfaction, married nurses reported higher levels of job satisfaction than their single peers. Moreover, nursing experience influenced job satisfaction, with more experienced nurses reporting higher levels of job satisfaction. These results are consistent with an earlier study by Zheng et al. (2017), in which the authors identified greater resilience in more experienced nurses and higher levels of job satisfaction in older age groups (Zheng et al., 2017). Resilience may be a characteristic worth exploring in future research.

The higher level of job satisfaction among married nurses in this study aligns with the findings of previous research (Alsarairh et al., 2014). Nurses with less experience were usually younger and burdened with less responsibility, especially in social contexts. Married nurses reported higher job satisfaction than single nurses. These studies highlight the important effect of personal characteristics on the overall job satisfaction of nurses.

Significant differences in job satisfaction were also found by job title, with managers reporting the highest mean score. This finding is consistent with earlier studies (Lu, While, & Barriball, 2008), in which managerial responsibilities were

associated with a slightly higher level of job satisfaction. Moreover, as professional commitments are known to influence job satisfaction (Lu et al., 2008), enhancing professional nursing commitments has the potential to benefit both individuals and employers. Another possible explanation is that registered nurses tend to have a more stressful, unpredictable, and emotionally burdensome professional life in acute clinical settings than managers. These findings underscore the importance of taking measures to understand and caring for the perceptions of working conditions. An important component of the retention strategy must address the predictors of job satisfaction and the differences in the implementation of this strategy between RNs and managers in acute wards.

Interestingly, the results of this study revealed a strong and significant correlation ( $r = .813$ ,  $p < .001$ ) between perceived QNWE and job satisfaction. These results confirm our underlying assumption. With regard to the perceived QNWE of RNs, higher levels of job satisfaction were reported. These results are consistent with an earlier study by Lu et al. (2008). A systematic review by Lu et al. (2012) found the sources and effects of job satisfaction to be similar across studies despite varying levels of job satisfaction. Hospital nurse job satisfaction levels are closely related to working conditions and organizational

environment (Lu et al., 2012). The findings of this study are similar to that investigation.

Starting with this innovative approach, the authors of this study found that perception of support and caring in the work environment affected the overall job satisfaction of psychiatric nurses working in an acute ward environment. This finding emphasizes the importance of taking measures that not only support nurses administratively but also apply a supportive managerial strategy that deals with the predictors of job satisfaction in psychiatric nursing. In addition, it is important to enhance the factors that promote and strengthen job satisfaction such as greater supervisory support, a more flexible work schedule, more responsiveness to staff work and lifestyle needs, stress and relief interventions, and care for nursing staff to optimize their performance (Madathil, Heck, & Schuldberg, 2014).

A further finding in this study that echoes those of earlier studies is the strong and positive correlation between team collaboration (professional specialization and teamwork) and job satisfaction (Roche & Duffield, 2010; Ward, 2011). Moreover, a previous multiple linear regression analysis identified that better “perceptions of professional specialization and teamwork” in the work environment are a significant predictor of job satisfaction in psychiatric nursing environments. However, it is important to develop and maintain a collaborative working relationship with professionals. The roles of psychiatric nurse are evolving, and psychiatric inpatients often present both physical and mental distress because of the side effects of atypical antipsychotic agents and multiple risk factors. Therefore, monitoring both physical signs and mental symptoms has become a common nursing task for psychiatric inpatients, working with complex and integrated physical and psychological problems requires strong nurse–physician workplace collaboration, and close-knit cooperation within the multidisciplinary team is likely to influence job satisfaction and patient care positively (Hanrahan et al., 2010; Zheng et al., 2017). According to another qualitative study, healthcare providers must discuss patient care on the basis of their respective expertise. Thus, problems are solved more rapidly when ideas are freely exchanged (Kieft et al., 2014). As stated by the participants in this study, communication among healthcare workers is necessary to ensure that information does not conflict and treatment is uniform. Moreover, it is important to enhance the organizational sources of job satisfaction such as ward climate, professional practice level, quality of communication and interaction, quality of relationships among colleagues, and managerial support (Lu et al., 2012; Ward, 2011).

## Limitations

This study was affected by several limitations. The central limitation was its cross-sectional design. In addition, as the measurements of perceived QNWE were based on self-reported data, their validity may be influenced by recall bias. Furthermore, this study did not investigate family obligations

and whether these were understood as obligations to care for children, parents, elderly relatives, and the home. Another limitation of this study is the representativeness of the sample. Because we used stratified random sampling, only four nurses from hospitals in central Taiwan responded, suggesting that it would be more appropriate to use a probability proportional to size (PPS) approach to sampling in the future. Using PPS, the probability of selection in a sampling unit is directly proportional to its size. PPS takes varying sample sizes into account, avoiding underrepresenting subgroups and yielding more accurate results. Therefore, the findings of this study may not be sufficiently representative of the nursing profession as a whole.

## Practical Implications

This was the first study to address the relationship between perceived QNWE and job satisfaction after adjusting for personal characteristics in hospital nurses working in acute psychiatric units. The results should be of interest to nursing administrators and healthcare policymakers. The findings indicate that job satisfaction in nurses relates to perceptions regarding work environment. Therefore, nursing managers should work to improve workplace satisfaction, support and care for nurses, and create better career advancement and teamwork opportunities through job training and career planning programs.

## Conclusion and Recommendations

The findings of this study corroborate the findings of other recently published articles in the literature regarding a positive relationship between perceptions of nurses regarding work environment and job satisfaction. The findings provide new information regarding nurses who work in the acute psychiatric wards of general hospital services. Perceived QNWE has implications for nurse job satisfaction in psychiatric nursing. The dimensions of perceived professional specialization, teamwork, support, and care in the workplace were identified as the primary predictors of satisfaction in psychiatric nurses.

One recommendation supported by study results is to address the relationship between perceived QNWE and job satisfaction after adjusting for personal characteristics by conducting a nationwide survey of nurses working in acute psychiatric units. This initiative would acknowledge the often-challenging work environment in these units while taking action at the managerial level to improve the dimensions that promote and strengthen job satisfaction. The result may be expected to enhance the organizational resources that were associated with greater job satisfaction and fulfillment in this study.

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## Author Contributions

Study conception and design: CFL, CJH  
 Data collection: WRH, CIH, FCL  
 Data analysis and interpretation: CJH  
 Drafting of the article: CFL, FCL, CJH  
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