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# Effects of nurse work environment on job dissatisfaction, burnout, intention to leave

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**Background:** The nursing shortage is a critical issue in many countries. High turnover rates among nurses is contributing to the shortage, and job dissatisfaction, intention to leave, and burnout have been identified as some of the predictors of nurse turnover. A well-established body of evidence demonstrates that the work environment for nurses influences nurse job dissatisfaction, intention to leave, and burnout, but there never has been a study undertaken in Thailand to investigate this relationship.

**Objectives:** To investigate how work environment affects job dissatisfaction, burnout, and intention to leave among nurses in Thailand.

**Methods:** The study used a cross-sectional survey to collect data from 1351 nurses working in 43 inpatient units in five university hospitals across Thailand. The participants completed the Practice Environment Scale of the Nursing Work Index, the Maslach Burnout Inventory, and measures of job dissatisfaction and intention to leave. Logistical regression models assessed the association between work environment and nurse-reported job dissatisfaction, burnout, and intent to leave.

**Results:** Nurses working in university hospitals with better work environments had significantly less job dissatisfaction, intention to leave, and burnout.

**Conclusion:** The nurse work environment is a significant feature contributing to nurse retention in Thai university hospitals.

**Implications for nursing and health policy:** Improving the work environment for nurses may lead to lower levels of job dissatisfaction, intention to leave, and burnout. Focusing on these nurse outcomes can be used as a strategy to retain nurses in the healthcare system. Addressing the challenges of poor work environments requires coordinated action from policymakers and health managers.

**Keywords:** Burnout, Intention to Leave, Job Dissatisfaction, Nurse Work Environment, Nurses, Nursing Policy, Thailand, University Hospitals

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## Introduction

The nursing shortage is a significant issue affecting healthcare systems globally. It also severely affects Thailand and can have a detrimental impact on patient care by preventing the healthcare system from providing high-quality safe care to patients. One of the causal factors for the nursing shortage is the high nurse turnover which can be a consequence of poor nurse work environments (Hayes et al. 2012; Kutney-Lee et al. 2013). Researchers have suggested improving nurse work environments as an effective strategy to reduce nurse turnover and improve nurse retention (Van den Heede et al. 2013). In order to develop strategies aimed at addressing the nursing shortage, it is essential to explore the relationship between the work environment and negative nurse outcomes such as job dissatisfaction, intent to leave, and burnout (Chen et al. 2008; Lu et al. 2012; Toren et al. 2012). This study explored the nurse work environment and how it relates to job dissatisfaction, burnout, and intention to leave within the context of Thai university hospitals.

## Background

Turnover, job dissatisfaction, and burnout are significant negative outcomes affecting the nursing workforce that require immediate attention and interventions by policymakers, managers and clinicians (Bria et al. 2013; Flinkman et al. 2010; Hayes et al. 2012). Nurse turnover has been categorized as either external or internal. According to the International Council of Nurses (2010 cited in Hayes et al. 2012, p. 888), external turnover refers to 'a numerical value attached to the number of people who leave an organization for various reasons as opposed to internal, which involves job changes within an organization'. Both types of turnover can contribute to the nursing shortage. External turnover might lead to inadequate staffing at the hospital level, whereas internal turnover might leave certain units within the hospital understaffed. Many researchers including Kane et al. (2007), Zhu et al. (2012) and Aiken et al. (2012) have expressed concerns that the nursing shortage adversely impacts the quality of care and patient outcomes. Turnover reduces the quality of care by reducing patient contact time, losing experienced staff and weakening teamwork (Buchan 2010).

Job satisfaction has been defined by Spector (1997, p. 2) as 'the extent to which people like or dislike their jobs'. It can also be described as a related constellation of attitudes on various aspects of the job or as a general feeling about job. The facet approach explores which part of the job produced satisfaction or dissatisfaction as opposed to the global approach, which quantifies the overall attitude of nurses. The job satisfaction of nurses has been shown to affect nurses' turnover

(Lui et al. 2015). Lake (1998) studied the factors predicting nurse turnover in the United States and the findings showed that job satisfaction, intention to stay with or leave the job, and resignation associated with nurse turnover. Another study found that job satisfaction was a substantial predictor of intentions to leave and high job satisfaction reduced turnover among nurses in an academic medical centre (Larrabee et al. 2003; Shader et al. 2001).

Burnout is also an important phenomenon affecting the nursing workforce. Maslach et al. (1996, p. 4) defined burnout as a concept comprised of three dimensions: (1) emotional exhaustion – 'feeling overextended and depleted of one's emotional resources'; (2) depersonalization – 'negative, cynical, detached and impersonal attitudes and feelings towards patients'; and (3) lack of personal accomplishment – 'a decline of feelings of competence and successful achievement in one's work'. Burnout can happen among individuals who work directly with people that need attention and support during a period of crisis. International work demonstrates that nurses in many countries experience high levels of burnout (Aiken et al. 2012). Notably, burnout is a serious issue leading to job turnover and absenteeism (Maslach et al. 1996) and turnover intentions among medical professionals (Bria et al. 2013). Although this study focused on turnover intentions, it is important to indicate that intentions are the most direct determinants of actual behaviour (Ajzen & Fishbein 1980; Igarria & Greenhaus 1992). Intention to leave a job is defined as a person's stated intention to leave the organization within some specific period of time (Dollar & Broach 2006). Nurses' intention to leave has been established to forecast the actual decision to leave their profession (Flinkman et al. 2010). The actual leaving behaviour is the major concern for nurse managers. A study conducted by Murrells et al. (2008) found that intentions expressed by nurses are strong predictors of turnover rate and suggest ascertaining nurses displaying early signals of leaving.

Improving work environments has been recommended as an effective strategy of solving the nursing shortage through promoting nurse job satisfaction and reducing burnout and nurses' intentions to leave their job. According to Tregunno (2004), 'work environment' refers to the perception workers have regarding elements of the organization. It has been acknowledged as a foundational place to shape the person's behaviour, and also mirrored the character of a setting or organization. In 2002, p. 178, Lake defined nurse work environment as 'the organizational characteristics of a work setting that facilitate or constrain professional nursing practice'. She further explained that these characteristics are influenced by managerial support for nursing, nurse participation in hospital affairs, promotion of care quality, staffing and resource adequacy and

doctor–nurse relations. Many international studies have been conducted to investigate nurse work environments in various healthcare settings, and results from these studies have illuminated how the nurse work environment affects nurse turnover (Aiken et al. 2012; El-Jardali et al. 2009; Mainz et al. 2015). Researchers have concluded that a better nurse work environment decreases the level of job dissatisfaction (Unruh & Zhang 2013; Van Bogaert et al. 2013; You et al. 2013), burnout (Li et al. 2013; Patrician et al. 2010; You et al. 2013) and intention to leave (Aiken et al. 2011; Coetzee et al. 2013; Van den Heede et al. 2013). Therefore, improving nurse work environment may be an effective method to address nursing shortage.

Nursing shortage is a priority workforce problem in Thai hospitals (Srisuphan & Sawangdee 2012), especially in university hospitals, which are public hospitals under the authority of the Ministry of Education. They combine the services of a hospital with research and the education of healthcare students. University hospitals care for patients who have complex conditions and take on referrals from area secondary and primary care hospitals. These hospitals employ numerous interdisciplinary specialists with expertise in medical fields and are equipped with advanced technologies. However, these hospitals face major nurse turnover, and hospital managers struggle to retain existing nurses (Jaiboon et al. 2011; Jeawkok et al. 2015; Khunthar et al. 2013). To develop optimal ways to alleviate the nursing shortage, a better understanding of the effects of nurse work environments on job dissatisfaction, intent to leave job and burnout is needed. However, there is very little information about the work environment in Thai hospitals. The aim of this study was to investigate the nurse work environment in Thai university hospitals and how nurse work environment affects job dissatisfaction, intention to leave and burnout among these nurses.

## Methods

### Conceptual framework

This study was guided by the Quality Health Outcomes Model (QHOM) (Mitchell et al. 1998), which was developed by modifying Donabedian's (1966) quality of care model that demonstrates a linear relationship between structure, process and outcomes. According to the QHOM, the nurse practice environment is acknowledged as a structural factor that is closely associated with nurse outcomes. In this study, the outcomes were nurse job dissatisfaction, turnover and burnout.

### Design

A cross-sectional survey design was applied to collect data with questionnaires.

### Sample

Stratified sampling was used to randomly select among all hospitals in the country. Purposive sampling was used to select work units within each hospital. Nurses in the sampled units were invited to participate in the study. Participants included inpatient nurses with at least 2 years of bedside experience. Nurse managers were excluded from the study because of the differences in their job duties from that of bedside nurses. The questionnaires were distributed to 1,750 nurses and 1,450 nurses returned the questionnaires (82.86% response rate). Ultimately, 43 units were sampled from five participating hospitals, and 1351 questionnaires were filled out completely and were used in this study. There were on average 30 responses from each nursing unit, which is a sufficient sample size for creating unit-level nurse-assessed variables (Aiken et al. 2011).

### Measurements

Nurse work environment was measured with Lake's Practice Environment Scale of the Nursing Work Index (PES-NWI). The PES-NWI is a validated instrument often used in international studies to measure the work environment of nurses (Aiken et al. 2011; Warshawsky & Havens 2011). Aiken et al. (2012) established the predictive and discriminant validity of the PES-NWI as it relates to nursing job outcomes. The validity of this index has been established in many international settings and used to differentiate work environments with different qualities. The PES-NWI was translated in Thai, and the translation was validated and verified by experts. The PES-NWI consists of 31 items grouped in the following five subscales: (1) Nurse Participation in Hospital Affairs (nine items); (2) Nurse Manager Ability, Leadership, and Support of Nurses (five items); (3) Nurse Foundations for Quality of Care (ten items); (4) Collegial Nurse–Physician Relations (three items) and (5) Staffing and Resource Adequacy (four items; Lake 2002). The internal consistency reliability of each PES-NWI subscale, translated to Thai, has been established with Cronbach's alphas ranging from 0.85 to 0.91 (Nantsupawat et al. 2011).

Nurses rated each item on PES-NWI on a four-point Likert scale ranging from 'strongly disagree' (1) to 'strongly agree' (4). The higher scores show that nurses perceived that the organizational features were presented in their current job. The PES-NWI composite score was created by aggregating individual nurse-level responses with the unit level and then calculating the mean of the subscale means. Work environment were classified in three categories based on the PES-NWI composite score: worse (<25th percentile), mixed (25th–75th percentiles), or better (>75th percentile) (Aiken et al. 2008).

*Job dissatisfaction* was measured by asking nurses to rate how satisfied they were with their current job. Nurses were considered to be dissatisfied with their job if they reported being 'very dissatisfied' or 'moderately dissatisfied', as compared to nurses who reported being 'somewhat satisfied' or 'very satisfied' with their current job. Prior research has confirmed the validity and reliability of single-item measures, which are generally used when determining global job satisfaction (Wanous et al. 1997).

*Intention to leave* was assessed by asking nurses to report whether they intended to leave their present nursing position in a year. Nurses' intentions of leaving their job predicted the actual decision to leave the profession (Flinkman et al. 2010).

*Burnout* was measured using the Emotional Exhaustion subscale of the Maslach Burnout Inventory, a widely used standardized tool with excellent psychometric properties to measure nurse burnout internationally (Poghosyan et al. 2009). The reliability and validity of the MBI subscales have been well established by Maslach & Jackson (1986). This study used the Thai version of the MBI-HSS translated by Mind Garden, Inc. Published internal consistency coefficients (Cronbach's  $\alpha$ ) for the EE subscale in Thailand was 0.87 (Nantsupawat et al. 2011). Developed by Maslach et al. (1996), the emotional exhaustion subscale consisted of nine items that ask nurses to respond on each item on the subscale using a 7-point Likert-type scale which ranged from 0 = never to 6 = every day. Respondents with a total score of 27 or above on this nine-item subscale exceeded norms of burnout for healthcare workers and were considered to have high burnout.

#### *Ethical considerations*

The study was approved by the Chiang Mai University Faculty of Nursing Research Ethics Committee (approval - EXP: 016-2014) and the ethics committee of each hospital. All participants gave informed consent prior to study participation, and their anonymity was preserved. The questionnaires were coded to classify hospitals and units without identifying individuals who completed the questionnaires.

#### *Data collection*

The questionnaires were sent to staff in each hospital's quality and accreditation development divisions. The division staff assisted the research team with the data collection. The staff dispersed the questionnaires to the registered nurses (RNs), in person, who met inclusion criteria in the selected units. Nurses returned the completed questionnaires in a sealed envelope to hospital staff and then staff provided completed questionnaires to the research team via mail.

#### *Data analysis*

Descriptive statistics were computed on the participants' demographic variables. Unadjusted and adjusted logistic regression models, which accounted for the clustering of nurses within their hospitals and units, were used to predict the relationship between nurse work environment and job dissatisfaction, burnout and intention to leave. The adjusted models controlled for nurse characteristics including age, education, years as RN, and working unit. Stata statistical software (StataCorp LP College Station, Texas) version 10.1 was used to analyse the data.

## Results

Participants' demographics are presented in Table 1. Almost all participants were female (97%) with an average age of 34 years old. The majority of participants held bachelor's degrees (87%). The majority of participants had 11 years of experience working as registered nurses and had been in their

**Table 1** Demographic characteristics ( $n = 1351$ )

Demographic characteristics	All respondents
Age, Mean (SD), year	34 (0.27)
22–30	564 (47.88%)
31–40	313 (26.57%)
41–50	225 (19.1%)
51–60	76 (6.45%)
Gender	
Male	35 (2.58%)
Female	1320 (97.42%)
Educational level	
Bachelor's degree	1178 (87.32%)
Master's degree or higher	171 (12.68%)
Working Unit	
Medical	116 (8.68%)
Surgical	153 (11.45%)
Paediatrics	125 (9.36%)
Orthopaedic	93 (6.96%)
OB&GYN	160 (11.98%)
Critical care	183 (13.70%)
Private unit	150 (11.23%)
OR/recovery room	177 (13.25%)
Other	179 (13.40%)
Years registered as registered nurse, mean (SD), year	11.4 (0.25)
Years working in the present unit, mean (SD), year	9.5 (0.21)
Nurses reporting very dissatisfied 'and 'moderately dissatisfied'	226 (16.86%)
Nurses reporting intent to leave their job in 6 and 12 months	139 (10.37%)
Nurses reporting high emotional exhaustion	689 (51.00%)

current unit for about 10 years. Approximately one in six nurses (17%) reported being dissatisfied with their job, and one in ten (10%) expressed intent to quit their job within a year. Around half of the participants (51%) had high burnout.

Subscale scores for the PES-NWI and classified work environment are presented in Table 2. The composite score, the mean of 5 PES-NWI subscales, is 2.91. The Nurse Foundations for Quality of Care subscale had the highest mean score (3.23). The subscale with the lowest mean scores was the Staffing Resources and Adequacy (2.56). Of the 43 units, 16 units were categorized as good and seven units were

categorized as poor. The results of the logistic regression analysis are shown in Table 3. Adjusted models reveal that the odds of nurses' reporting job dissatisfaction (OR = 0.67, 95% CI 0.57–0.77), intention to leave (OR = 0.75, 95% CI 0.54–0.99) and emotional exhaustion (OR = 0.78, 95% CI 0.70–0.78) were significantly lower for nurses who worked in unit with better work environment than for nurses who worked in mixed environment. These results indicate that nurses with a better work environment reported dissatisfaction, intention to leave and emotional exhaustion at a 39 (i.e.  $[1-0.78^2] \times 100$ ) to 55% lower rate than poor work environments.

**Table 2** Subscale scores for the PES-NWI\* and classified work environment

Variables	No (%)	Mean (SD)	Range
Subscale scores for the PES-NWI			
Nurse foundations for quality of care		3.23 (0.13)	2.80–3.48
Nurse participation in hospital affairs		2.79 (0.19)	2.44–3.26
Nurse manager ability, leadership, and support		2.98 (0.20)	2.20–3.40
Collegial nurse–physician relations		2.97 (0.21)	2.00–3.24
Staffing resource and adequacy		2.56 (0.31)	1.50–3.06
Composite score		2.91 (0.10)	2.34–3.24
Classified work environment			
Best	16 (37.21)		
Mixed	20 (46.51)		
Poor	7 (16.28)		

PES-NWI, Practice Environment Scale of the Nursing Work Index.

\*A higher score represents a more positive work environment.

## Discussion

This study investigated nurse work environments and its association with nurse job satisfaction, turnover intentions, and burnout in Thai hospitals. Study findings indicate that many nurses in these units are dissatisfied with their job and intent to leave their present positions. Almost half of the nurses report burnout. These results are consistent with findings described in other studies conducted in Thailand (Nantsupawat et al. 2011, 2015) and internationally (Aiken et al. 2011, 2012; You et al. 2013). Job dissatisfaction, burnout and intention to leave are important nurse workforce outcomes given their impact on patient care and patient safety. Observing such high prevalence of poor outcomes among these nurses could possibly be explained by the work environments in these units. Work environments in these units were characterized by poor foundations for quality of care, participation in hospital affairs, nurse manager, nurse–physician relation and also lack of staffing and resources. Our findings are consistent with the findings of other studies, which show that university hospitals experience significant understaffing issues because of high turnover rates among nurses, which has been estimated to range between 5

**Table 3** Odds ratio estimating the effect of nurse work environment on nurse-reported outcomes

Factor	Odds ratio (95% CI)					
	Job dissatisfaction		Intent to leave		High emotional exhaustion	
	Unadjusted	Adjusted*	Unadjusted	Adjusted*	Unadjusted	Adjusted*
Nurse work environment	0.66 (0.57–0.76) P = 0.000	0.67 (0.57–0.77) P = 0.000	0.74 (0.53–0.99) P = 0.04	0.75 (0.54–0.99) P = 0.04	0.82 (0.74–0.91) P = 0.001	0.78 (0.70–0.88) P = 0.000

Estimate for the nurse work environment represents the change in odds ratios for the effect of 'better vs. mixed' or 'mixed vs. worse'.

\*Models control for age, education, years as RN, and working unit.

and 10% (Jaiboon et al. 2011; Jeawkok et al. 2015). In addition, in the university hospitals, nurses provide critical care for patients who have complex conditions and needs, and nurses need to be concerned not only with quality of care, but also with cutting costs by controlling the length of patient stay (Kittimanon & Wangkomthong 2014). They worked an average of 18.82 additional hours per week than the traditional 40-h workweek. (Chitpakdee & Roongruangsri 2015). These work environment may account for the feelings of job dissatisfaction, burnout and intentions to leave documented in this study.

The university units participating in this study had a high mean score for Nurse Foundations for Quality of Care measured by the PES-NWI. Such finding indicates that these hospitals create a favourable environment that supports delivering high quality of care according to nursing standards. This may be explained by the fact that all Thai university hospitals are accredited by the Healthcare Accreditation Institute (a government organization), and nurses in these hospitals must maintain standards of care, evaluate quality and use continuous quality improvement. Quality improvement initiatives are built into the work environment.

In addition, in the units work environments were characterized by strong nurse managers, leadership, support and collegial nurse–physician relations, as measured by the corresponding subscales of the PES-NWI. This may be described by the reason that nurse managers in these units must have rigorous leadership training and extensive experience in nursing administration. Additionally, because university hospitals support the teaching and learning of healthcare students, staff members in units work as collaborative teams. These factors promote good working relationships between nurses and physicians. Thus, we observed high mean scores on PES-NWI subscale measuring the relationship between nurses and physicians.

We found that hospitals lack adequate staffing and resources in addition to nurses not participating in hospital affairs. The low scores for staffing resources and adequacy and nurse participation in hospital affairs found in this study is consistent with findings from another study conducted in Thai hospitals (Nantsupawat et al. 2011). We found that poor staffing resources explain nurses' job dissatisfaction, burnout and intention to leave. Thus, in order to improve nurses' job satisfaction and reduce burnout and intention to leave in university hospitals, attention should be paid to improving staffing and resource development.

The low participation on hospital affairs should be explored further as this may be due to few opportunities for nurses to participate in setting hospital policy. Nurses might

not be actively involved in decision-making processes at unit level. Other Thai studies have also documented low nurse involvement in hospital policy development. Kunaviktikul (2014, p. 1) stated that 'nurses had no involvement in health policy formulation and modification, even though they represented slightly more involvement in policy implementation'. Laddapan (2006) revealed that only half of nurse administrators in Thai hospitals were involved in hospital policy development. It is possible that nurses' heavy workload prevents them from participating in policy setting or even acknowledging this as part of their role (Kunaviktikul et al. 2010). Boswell et al. (2005, p.5) noted that 'heavy workloads, powerlessness, gender issues, oppressive images, understaffing, management inapproachability, fear of infringement on family time, anxiety with public speaking, and fear of retaliation negatively affect the political involvement of nurses'.

Our findings confirmed that better work environments were correlated with lower rates of job dissatisfaction, burnout and intention to leave and conversely supported previous international studies linking negative work environments with job dissatisfaction (Aiken et al. 2008, 2011, 2012; Kutney-Lee et al. 2013; Patrician et al. 2010), intent to leave (Hinno et al. 2011) and burnout (Aiken et al. 2008, 2012; Kutney-Lee et al. 2013; Patrician et al. 2010). The findings imply that better work environments will help nurses to provide better care to patients, increase their job satisfaction and lower intention to leave and burnout.

### Implications for nursing policy and health policy

To help alleviate the nursing shortage, it is important for hospital managers and policymakers in Thailand and other countries where there are nursing shortage issues, to develop policy strategies and take actions for improving nurse work environments. Such strategies include providing adequate staffing levels and ensuring that nurses have the resources to deliver the best care possible to patients. This also includes having a low nurse to patient ratio allowing enough time for each patient and nurse to discuss patient care problems. Hospital directors should promote nurses' involvement in hospital and nursing department affairs, offer opportunities for advancement, encourage open communication with nursing administration and acknowledge nurses as authoritative and accessible executive staff members. Nurse managers should be trained to have leadership skills. There is a need to foster positive working relationships between nurses and physicians. Finally, a high standard of patient care can be achieved through implementation of nursing philosophy, nursing model of care and better standards for nurses' clinical competence.

## Conclusions

This study explored how hospital work environments impacts nurse job dissatisfaction, burnout and intention of nurses to leave jobs in Thai university hospitals. We found that a poor nurse work environment is the underlying factor of nurse attrition and turnover. We suggest that improving nurse work environment should be emphasized through policy to retain nurses in the workforce. Further research is needed to investigate the tools, guidelines and interventions used by managers in the nursing field to create healthy and welcoming working conditions. This will help to retain nurses, particularly experienced qualified nurses, which can help hospitals deliver high-quality patient care.

## Limitations

This study relied on self-reports to measure nurse work environments and outcomes. Participants may not have accurately reported on their work environments or outcomes. The generalizability of the results may be limited to settings similar to our study, as the majority of nurses in Thailand do not practise in university hospitals.

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## Author contributions

Study design, data collection and data analysis: AN, WK, RN, OW, HT Manuscript writing: AN, RN, WK, OW, HT, LP Critical revisions for important intellectual content: AN, LP

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