

## ORIGINAL ARTICLES

# Nurse practice environment and work engagement among nurses in selected public hospitals in Hanoi, Vietnam, 2024

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## ABSTRACT

**Objectives:** This study aimed to identify the relationship between nurses' perceptions of their work environment and work engagement in selected public hospitals in Hanoi, Vietnam in 2024.

**Methods:** A cross sectional design was utilized in this study with 372 nurse respondents who were randomly selected in public hospitals using the proportional sampling method. The research utilized an open-access and validated structured questionnaires adopted from Nurse Practice Environment Scale and Utrecht Work Engagement Scale-9 (UWES-9). Research implementation took place between December 2023 and February 2024. The SPSS software version 20 was used for data analysis in which descriptive statistics were used to summarize the demographic profile, mean, normality and relationship between study variables.

**Results:** There was a positive significant correlation between nurse practice environment and work engagement among nurse respondents ( $r = 0.42$ ,  $p < 0.001$ ). All the dimensions in the nurse practice environment scale positively correlated with all the dimensions of the work engagement scale as manifested by coefficient  $r$  ranging from 0.25 to 0.44,  $p < 0.001$ ). It was noted that the more nurses participated in internal governance and as they improved their relationship with physicians, the more they became dedicated to their hospital work ( $r = 0.43$  and  $r = 0.44$ ,  $p < 0.001$ ).

**Conclusion:** A positive work environment encourages and sustains work engagement. An attractive and supportive work environment has numerous properties that may influence motivation, engagement, satisfaction, and autonomy. Nurses should be more involved in governance and policy decisions to ensure a proactive nursing practice environment and work engagement.

**Keywords:** *Nurse practice environment; work engagement; nurses; public hospitals.*

## INTRODUCTION

Fostering a nurse practice environment that cultivates the professional growth of the nurses and reflects high level of work engagement is imperative in all hospital institutions. It refers to the nurse participating in hospital affairs; nurse foundation for quality of care; nurse manager, leadership and support for nurses; staffing and resources adequacy; and collegial nurse-physician relationship (1). More than the structure, it is the

organizational climate reflective of quality of care, patient outcomes, safety and quality, and job outcomes (2).

Work engagement is a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption. Rather than a momentary and specific state, engagement refers to a more persistent and pervasive affective cognitive state that is not focused on any particular object, event, individual, or behavior (3).

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Previous studies have demonstrated that work engagement can raise the standard of nursing care by inspiring nurses to use all of their knowledge and skills (4). High job engagement of nurses demonstrates an increase in compassionate behavior, job happiness, and worker productivity (5). Low burnout and fewer plans to leave the profession are also correlated with high levels of nurse engagement (6). Moreover, it is evident that a favorable work environment significantly reduces job burnout and job stress and improves quality of patient care (7). According to a number of studies (8, 9) a positive work environment is associated with successful work results.

Work environment is an important precursor for work engagement indicated in a many studies. A cross-sectional study in China from 43 clinical units investigated the situation of nursing work environment, work engagement, nurse-perceived quality of care and turnover intention among psychiatric nurses and examined the relationship among them (10). Work pressure moderated the relationship between work practice environment and work engagement (11).

In general, nursing practice environment may vary based on the type of hospital. In Vietnam, hospitals are classified according to level and specialization. Despite the differences in the types of hospitals, not many studies have described nursing practice environments nor investigated whether nurse job outcomes differ in varied types of hospitals. Research has shown significant correlation among nurse practice environment and work engagement. However, in the context of Vietnamese setting, there are limited studies about this issue, therefore, this study aims to explore the relationship between nurse practice environment and the work engagement among nurses in selected two public hospitals in Hanoi, Vietnam.

## METHODS

**Research design:** A cross sectional design was utilized in this study.

**Study site and time:** December 2023 to February 2024 in two selected public hospitals.

**Study subjects:** Nurses are working in the clinical department in two selected public hospitals.

**Inclusion criteria:** The study included those who were working fulltime with license; working in the clinical department (Emergency Room, Surgical-Medical department, ...); involved in direct patient care; and had at least 1 year of clinical experience.

**Exclusion criteria:** the head nurses; nurse supervisors; blocked nurse; and those who were on long-term leave or on the job training (more than 3 months).

**Sample size and sampling methods:** 372 nurse respondents who were randomly selected using the proportional sampling method.

**Tools and methods of data collection:** A structured self-administered questionnaire consisted of demographic profile, Nurse Practice Environment Scale (NPES) and Utrecht Work Engagement Scale-9 (UWES-9) was used to collect data. The NPES included 5 subscales with 31 items. Each item was rated in 4 Likert scale in which 2.5 is the neutral midpoint. Scoring of the NPES was categorized for unfavorable, mixed, and favorable environments. A favorable environment receives scores of > 2.5 on all or four out of 5 subscales, mixed receives scores of > 2.5 on two or three out of 5 subscales, and unfavorable receives scores of > 2.5 on one or none of the 5 subscales (1). The UWES-9 has 9 items, 3 subscales, each item was rated in 7 points Likert scale based on the frequency they adopt coping styles in their daily work (0-never; 1- almost never; 2- rarely; 3-sometimes; 4- often; 5- very often; 6-always). The higher the score, the more engaged nurses are in their work. These two instruments were validated with acceptable internal content validity index of 0.96 for NPES and 0.93 for UWES-9 (18). In addition, a pilot testing was conducted among 30 nurses to determine the

reliability of the research instrument. Both NPES and UWES-9 illustrated and impressive Cronbach alpha of 0.91.

**Processing and analyzing data:** Descriptive statistics were used to summarize the demographic profile of the nurse respondents. Shapiro-Wilk test was used to test the normality of the continuous variables. Frequency and proportion were used for categorical variables, median and inter quartile range for non-normally distributed continuous variables, and mean and standard deviation for normally distributed continuous variables. Spearman's Rho test was used to determine significant relationship between study variables. Null hypothesis was rejected at  $0.05\alpha$ -level of significance. SPSS software version 20 was used for data analysis.

**Research ethics:** The research is approved in terms of science, ethics and permission to implement the topic. The scientific research has been approved by Institutional ethics review committee, Trinity University of Asia according to Decision No. 2023-1st-CNU-Nguyen-v1 dated October 3, 2023.

## RESULTS

In 372 nurs, the mean age of nurse respondents was  $34.08 \pm 6.7$ , most of them were female (79.6%) who hold diploma and bachelor's degree (91.4%), had been working in the hospital between 5 and 15 years (62.6%). The majority of nurse respondents were married (79.3%) and earning average 10-15 million Vietnam Dong per month (58.3%).

**Table 2. Assessment of Nurse Practice Environment**

Nurse Practice Environment	Mean (n=372)	SD	Verbal Interpretation
Nurse Participation in Hospital Affairs	3.12	.44	Agree
Nurse Foundations for Quality of Care	3.17	.38	Agree
Nurse Manager Ability, Leadership Support of Nurses	3. 21	.42	Agree
Staffing and resources Adequacy	3.10	.47	Agree
Collegial Nurse-Physician Relationship	3.11	.44	Agree
<b>Overall</b>	<b>3.15</b>	<b>.37</b>	<b>Agree</b>

*Legend: 3.26-4.0 - Strongly agree; 2.51-3.25 – Agree; 1.76-2.5 – Disagree; 1.00-1.75 – Strongly disagree*

Table 2 showed the assessment of nurses on their Nurse Practice Environment in selected public hospitals in Hanoi, Vietnam with an overall mean score of  $3.15 \pm 0.37$  verbally interpreted as "Agree" which implies a favorable environment. Among the subscales, nurse respondents rated the sub-dimension "Adequacy staffing and other resources" with the lowest mean score of  $3.10 \pm 0.47$  while

the sub-dimension "Nurse Manager Ability, Leadership and Support of Nurses" with the highest mean score of  $3.21 \pm 0.42$ . These were closely followed by "Collegial Nurse – Physician relation"; "Nurse Participation in the Hospital Affairs" and "Foundation for Quality of Care" which illustrated weighted mean score of  $3.11 \pm 0.44$ ;  $3.12 \pm 0.44$ ; and  $3.17 \pm 0.38$ , respectively.

**Table 3. Assessment of Work Engagement**

Work Engagement	Mean (N=372)	SD	Verbal Interpretation
Vigor	4.45	.97	Very often
Dedication	4.65	.95	Very often
Absorption	4.43	.97	Very often
<b>Overall</b>	<b>4.48</b>	<b>.89</b>	<b>Very often</b>
<i>Legend</i>			
0-0.85	Never	3.43 – 4.27	Often
0.86- 1.71	Almost never	4.28 – 5.13	Very often
1.72- 2.56	Rarely	5.14 – 6.00	Always
2.57 – 3.42	Sometimes		

Table 3 shows that an overall mean score of work engagement was  $4.48 \pm .89$  verbally interpreted as “Very Often” which implies high motivation and commitment to their roles and responsibilities. Among the subscales,

nurse respondents rated the sub-dimension “Absorption” with the lowest mean score of  $\bar{x} = 4.43 \pm 0.97$  while the sub-dimension “Dedication” with the highest mean score of  $\bar{x} = 4.65 \pm 0.95$ .

**Table 4. Correlation between Nurse Practice Environment and Work Engagement**

Variables	1	2	3	4	5	6	7	8	9	10
1. NPHA	1.00	.70	.62	.57	.52	.33**	.44**	.36**	.86	.41**
2. NFQC		1.00	.68	.65	.64	.29**	.39**	.32**	.86	.36**
3. NMLS			1.00	.62	.87	.28**	.36**	.25**	.78	.33**
4. SRA				1.00	.65	.26**	.37**	.30**	.75	.33**
5. CNPR					1.00	.32**	.44**	.35**	.68	.38**
6. VG						1.00	.79	.68	.36**	.93
7. DC							1.00	.76	.48**	.92
8. AST								1.00	.37**	.88
9. NPE									1.00	.42**
10. WE										1.00

Note: NPHA (Nurse Participation in Hospital Affairs); NFQC (Nurse Foundation for Quality of Care); NMLS (Nurse Manager, Leadership Support for Nurse); SRA (Staff and Resource Adequacy); NPC (Collegial Nurse-Physician Relationship); VG (Vigor); DC (Dedication); AST (Absorption); NPE (Nurse Practice Environment); WE (Work Engagement).

Table 4 presented that correlational analysis demonstrated significant moderate positive correlation between their Nursing Practice Environment and Work Engagement ( $r = 0.42$ ;  $p < 0.001$ ). Specifically, all subscales

of their Nursing Practice Environment illustrated significant positive correlation with all subscales of Work Engagement ( $r$  ranged from 0.25 to 0.44  $p < 0.001$ ). The more the opportunities for “Nurse Participation in the

Internal Governance" ( $r = 0.43$ ;  $p < 0.001$ ) were; and the better the "Collegial Nurse-Physician relationship" was ( $r = 0.44$ ;  $p < 0.001$ ), the more dedicated and engaged the nurses were in their work.

## DISCUSSION

The assessment on Nurse Practice Environment ( $3.15 \pm 0.37$ ) confirmed the existence of a favorable environment. Considering all the subscales, findings of the study indicate that adequacy of staffing and other resources, being the lowest mean score, ( $3.10 \pm 0.47$ ), are very crucial to handle increased pressure and prevent depletion of resources in the hospital operation. Adequate staffing and resource management are key to hospital efficiency, growth, and sustainability. They enhance operational performance, support recruitment and retention, and help streamline nurses' workloads.

"Nurse Manager Ability, Leadership and Support of Nurses" illustrated the highest mean score of  $3.21 \pm 0.42$  which implies that at the heart of creating a positive and productive nurse practice environment is effective leadership. Leaders play a critical role in shaping the culture of an organization, and their supportive actions and attitudes have a significant impact on the overall well-being of nurses. In today's fast-paced and highly competitive practice environment, it has become a top priority for nurse managers to keep a healthy workplace culture. A healthy workplace culture is one that fosters staff engagement and productivity. An excellent nurse manager, combined with strong leadership, encourages teamwork, innovation, and creativity, where nurses feel valued, respected, and supported.

As for "Collegial Nurse – Physician relation"; "Nurse participation in the Hospital Affairs" and "Foundation for quality of care", which

have gained the weighted mean scores of  $3.11 \pm 0.44$ ;  $3.12 \pm 0.44$ ; and  $3.17 \pm 0.38$ , respectively. These results connote that physicians and nurses are pressured to maximize the number of patients they see and having minimized time to spend with each is considered as counterproductive. Overworked physicians and nurses rarely have the time for difficult conversations and patients may not fully understand the importance of complying with all aspects of their recommended treatments, which eventually leads to deteriorating nursing outcome. Moreover, nurses must be able to make appropriate and rational decisions based on patient care needs, rules, regulations, and circumstances that are constantly changing. The ability of nurses to participate in hospital affairs can move their hospital institution in the right direction, determine organizational goals, and decide which activities are desirable and critical to practice environment. Furthermore, the foundation for quality care requires doing the right thing at the right time in the right way for the right patient and having the best results possible. Nurses need to strike the right balance in the provision of health services by improving quality that is focused on safe, effective, patient-centered, timely, efficient and equitable care.

The shortage of nurses in hospital setting is a global concern and Vietnam is no exception. Decision No. 20/2017/QD-TTg of the Prime Minister approving the master plan for the development of Vietnam's health system up to 2016 and vision to 2030 which stipulates the ratio nurse per ten thousand population is 25 in 2025 and 33 in 2030 (12). However, the number now is just 11.4/10.000; 1 doctor/1.5 nurses; which is much lower when compared with Thailand, Philippines, and Japan. In addition, after Covid-19, public hospitals have experienced a more challenging procedure for bidding, acquisition of medication supplies and equipment, and addressing the health needs

of the patients. The impact of the epidemic was also evident on the manufacturing and distribution of pharmaceutical and medical supplies. Similarly, work overload became common especially for referral of difficult cases to hospitals. Thus, nurses had to perform multiple roles including discharge payments; insurance appraisal, transferring patient; drugs; materials, which was a concrete manifestation of serious shortage of staff nurses.

The assessment on work engagement of nurses in the selected public hospitals in Hanoi, Vietnam showed an overall mean score of  $4.48 \pm 0.89$ , verbally interpreted as "Very Often" which implies high level of motivation and commitment to their roles and responsibilities. Findings confirm that "Absorption" ( $\bar{x} = 4.43 \pm 0.97$ ) has the lowest mean score which suggests that nurses have to improve on having optimal clinical experience in order to acquire a sense of mastery, competence and autonomy that satisfy professional needs. On the other hand, "Dedication" ( $\bar{x} = 4.65 \pm 0.95$ ) obtained that highest mean score which reflects that nurses have strategies to stay motivated during the workday, attempting to get all of their tasks done on time.

Although nurses experience favorable work environment, staffing and resources remain as a major concern. The high commitment of nurses resonates that motivation is the key to their productivity. Working in a well-known tertiary public general hospitals, not only in Vietnam but also nationwide and even in all of South-east Asia region allows them to build relationships with colleagues who are great motivators within the workplace. Being in constant contact with knowledgeable, experienced and highly-dedicated clinical practitioners who share a similar vision of the professional advancement also keep nurses motivated at work. Mentoring and coaching essentially provide nurses with an excellent support system as well.

However, other items of work engagement that call for further enhancement include "I get carried away when I am working ( $\bar{x} = 4.27$ )"; and "I am immersed in my work" ( $\bar{x} = 4.30$ ). This result could be equated with the selected research locales that cater to most referrals of critical cases from the provincial and national level. At times, work-related pressure causes job quit, collegial conflict, decreased professional satisfaction, and fatigue from work which can reduce energy and work efficiency and eventually reduced quality of nursing care. Hence, it is important to identify psychosocial risk factors, and plan for preventive interventions to increase the efficiency and effectiveness of nurses' activities. Providing soft skill programs such as team working, behavioral and communication skills and teaching effective coping strategies would help reduce stressors and prevent anxiety and burnout.

It was illustrated that all subscales of their Nursing Practice Environment had significant positive correlation with all subscales of Work Engagement among nurses in the selected public hospitals ( $r$  ranged from 0.25 to 0.44  $p < 0.001$ ). The highest correlation was found between nurse practice environment and dedication ( $r = 0.48$ ,  $p < 0.001$ ). The positive correlation implies that the more nurses participate in hospital affairs, the more they establish a higher foundation for quality of nursing care. Consequently, the more support from nurse leader and manager, the more efficient staffing and resource adequacy get provided. Nursing is a demanding and challenging profession that requires a high level of skill, dedication, and compassion. Despite the many issues in the workplace that can affect nurses' job satisfaction, well-being, and ability to provide quality care to their patients, having a supportive work environment is essential in order to provide nurses not only tangible assistance in the form of sufficient staffing and resources, but

also strong nursing foundations.

Previous researches have shown that the work environment is a significant predictor of work engagement. A cross-sectional study comprising 43 clinical units was carried out in China to investigate the state of the nursing work environment, work engagement, perceived quality of care by nurses, and intention to leave among psychiatric nurses. The study also examined the relationships between these variables. The outcomes of the hypothesis test showed that the five aspects of the nursing work environment had a favorable impact on nurses' perceptions of the quality of care they received and a negative impact on their intentions to leave their jobs. These effects were somewhat mediated by work engagement. This study supported the notion that enhancing the working environment for nurses was a crucial strategy (15).

Nurse leadership and manager support is very important for improving nurses' engagement in their work. It was found out that, the more support is obtained from nurse managers, the more engaged nurses are ( $r = 0.33$ ,  $p < 0.001$ ). The findings of current study conform with the outcome of a study conducted among 260 employees and managements in five selected public departments to examine the antecedents of employee engagement and their effect on public sector service delivery in Harare, Zimbabwe. It was found that there is a significant positive relationship between effective leadership and employee engagement ( $r = 0.55$ ,  $p < 0.05$ ). In addition, the findings also disclosed a significant positive relationship between training and career development and employee engagement ( $r = 0.66$ ,  $p < 0.05$ ) (16).

Furthermore, results of the present study align with the outcome of study conducted among 107 nurses who handled COVID-19 at Hasanuddin University Hospital Makassar. The result of this research showed that work

environment influenced work engagement ( $p < 0.001$ ). Recommendations to enhance the work environment of nurses in the hospital include conducting discussions between superior and subordinate as well as fellow co-workers, giving adequate resources and support, providing good work environment for nurses so that they would be able to better serve the patients, and having a strong attachment to work and organization (17).

## CONCLUSION

In summary, nurse experience a favorable nurse practice environment and high level of work engagement in selected public hospitals in Hanoi, Vietnam. The nursing practice environment was positively associated with work engagement. Study findings suggest that a supportive working environment is a significant factor influencing staff nurses' sense of self-worth and willingness to devote themselves to their work. Hospital administrators and nurse managers need to provide more opportunities for staff nurses to be involved in governance and policy decisions to further enhance their self-efficacy. Similarly, enhancement of collegiality between nurses and physicians would offer more opportunities for growth and advancement within their profession that would foster a proactive nursing practice environment and high level of work engagement.

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