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DETERMINANTS OF WORK ENGAGEMENT AMONG NURSES: THE ROLE OF PRACTICE ENVIRONMENT AND ORGANIZATIONAL COMMITMENT

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ABSTRACT

Objective:** This study aimed to assess the relationship between the nurse practice environment, organizational commitment, and work engagement among nurses in government hospitals in Hanoi, Vietnam. **Methods:** A descriptive-correlational design was conducted among 372 staff nurses from two tertiary government hospitals selected through proportional and systematic sampling. Data were collected using validated instruments: the Nurse Practice Environment Scale, Organizational Commitment Questionnaire, and the Utrecht Work Engagement Scale, all adapted and validated in Vietnamese. Descriptive statistics, correlation, and multiple regression analyses were performed using SPSS version 16, with significance set at $p < 0.05$. **Results:** Nurses reported a favorable practice environment ($M = 3.15$, $a = .91$), high organizational commitment ($M = 3.65$, $a = .86$), and high work engagement ($M = 4.48$, $a = .91$). Regression analysis showed that both nurse practice environment ($\beta = 0.19$, $p < .001$) and organizational commitment ($\beta = 0.48$, $p < .001$) significantly predicted work engagement, explaining 35.7% of its variance ($R^2 = 0.357$). Further analysis using subscales revealed that affective commitment ($\beta = 0.34$, $p < .001$), nurse participation in hospital affairs ($\beta = 0.235$, $p < .001$), and collegial nurse–physician relationships ($\beta = 0.21$, $p < .01$) were the strongest predictors of engagement ($R^2 = 0.396$). **Conclusion:** The study highlights that a positive work environment and strong organizational commitment are key determinants of nurses' engagement. Affective commitment to the organization, nurse participation in hospital affairs, and collegial nurse–physician relationships significantly enhance engagement levels. Strengthening these aspects through inclusive leadership, recognition, and empowerment initiatives is essential for sustaining a motivated, loyal, and high-performing nursing workforce in Vietnam's healthcare system.

KEYWORDS: Nurse Practice Environment, Organizational Commitment, Work Engagement, Affective Commitment, Vietnam Nurses.

1. INTRODUCTION

Fostering a nurse practice environment that cultivates the professional growth of nurses and reflects a high level of organizational commitment and work engagement is imperative in all hospital settings. The nurse practice environment is a multidimensional concept that extends beyond the physical setting—it encompasses the organizational culture, governance, and professional relationships that influence quality of care, patient outcomes, and staff satisfaction (Lake et al., 2019). Effective leadership, participation in decision-making, job security, fair benefits, and recognition are among the most critical components of a positive environment. These factors enable nurses to translate theoretical knowledge into practice, develop essential psychomotor and interpersonal skills, and adapt effectively to their professional roles.

Hospitals with a favorable professional practice environment tend to foster greater nurse participation in hospital affairs, enhance the foundation for quality care, strengthen nurse managers' leadership and support, ensure sufficient staffing and resources, and maintain collegial nurse–physician relationships (Lake et al., 2019). Al Hamdan et al. (2019) emphasized that these conditions contribute to successful work outcomes and increased job satisfaction, reflecting a higher degree of organizational commitment among nurses. Organizational commitment includes affective, continuance, and normative components—each reflecting how emotionally, economically, and ethically attached nurses are to their institutions. Highly committed nurses align themselves with the organization's values and take responsibility for its success. Such commitment leads to higher patient satisfaction, improved safety and quality of care, lower turnover, and sustained engagement (Drake et al., 2022).

Work engagement, another key dimension, enhances the standard of nursing care by inspiring nurses to fully utilize their knowledge and skills (Elliot et al., 2020). It is defined as a positive, fulfilling, work-related state characterized by vigor, dedication, and absorption. Vigor involves high energy and resilience at work, dedication entails enthusiasm and pride, and absorption refers to deep immersion and focus on one's tasks. De Los Santos and Labrague (2021) reported that work engagement improves compassion, job satisfaction, and productivity. Unlike temporary emotions, engagement represents a sustained cognitive–affective state that enhances both personal and organizational performance in healthcare environments.

The nursing practice environment varies according to hospital type and setting. In Vietnam, hospitals are categorized by level and specialization, yet few studies have explored how these variations affect nurse job outcomes. Empirical findings indicate significant correlations among nurse practice environment, organizational commitment, and work engagement (S. Seren Intepeler et al., 2019). A positive work environment promotes stronger organizational commitment, while higher commitment encourages greater effort and dedication to patient care. Nurse practice environment serves as a major predictor of both organizational commitment and work engagement, with the latter being partially mediated by the former (Ni et al., 2023).

Vietnam, a developing nation with approximately 94 million people, has a relatively young nursing profession shaped by its historical context. As of 2018, there were about 108,108 nurses nationwide, a ratio still low compared with other countries (Committee, 2017). In large public hospitals with capacities of 1,300 to 3,000 beds, nurses comprise around 50% of staff, yet personnel shortages persist—worsened by the COVID-19 pandemic. Overwork, burnout, and dissatisfaction are prevalent due to excessive workloads and long shifts, sometimes extending to 24 hours. Furthermore, limited representation of nurses in hospital governance—compared to counterparts abroad—restricts their influence on decision-making and reward systems.

Prior studies in Vietnam revealed that work environment and professional development significantly affect organizational commitment (Phan & Doan, 2019), while job resources positively correlate with work engagement (Van Minh et al., 2019). However, few have examined the interrelationships among these variables. This gap underscores the need for further research to analyze how nurse practice environment and organizational commitment jointly influence work engagement—an endeavor crucial to strengthening Vietnam's nursing workforce and improving patient care outcomes.

2. MATERIALS AND METHOD

2.1. Study Settings, Participants, And Sample Size

This study employed a descriptive-correlational design to examine the relationship between nurse practice environment, organizational commitment, and work engagement among direct care nurses in government hospitals in Hanoi, Vietnam (Stangor &

Walinga, 2019). Two large tertiary hospitals were selected as research locales: Hospital A, a 3,000-bed capacity facility with multiple specialties and approximately 2,000 nurses, and Hospital B, a 1,300-bed capacity facility with about 800 nurses. Both hospitals serve as referral centers within the national healthcare hierarchy and handle complex medical cases, leading to heavy workloads and an often-unfavorable practice environment characterized by staff shortages, limited participation in governance, and communication challenges among staff.

The study population consisted of licensed staff nurses aged 21–59 years, employed full-time, able to read and write in Vietnamese, and with at least one year of professional experience. Excluded were nurse managers, those on long-term leave (≥3 months), and those in training for more than three months. Using the Raosoft sample size calculator with a 95% confidence level and 10% allowance for nonresponse, a minimum of 372 nurses was required. Proportional sampling determined the number of participants from each hospital—266 nurses from Hospital A and 106 nurses from Hospital B—while systematic sampling within departments ensured unbiased representation. This method ensured that every nurse had an equal chance of being selected, thereby minimizing selection bias.

2.2. Data Collection Procedure

Prior to data collection, the study proposal was reviewed and approved by the Graduate School and Ethics Board of Trinity University of Asia, and further permission was secured from the administrative heads of the participating hospitals. Eligible participants were identified according to inclusion and exclusion criteria. Data collection was conducted from December 2023 to February 2024. A trained research assistant facilitated survey distribution to avoid bias, considering the researcher's role as a nurse manager. Each participant received a cover letter detailing the study's purpose, benefits, and minimal risks. Completing the questionnaire required approximately 15–20 minutes, after which the research assistant revisited within a week to retrieve completed forms and verify data completeness. Voluntary participation and confidentiality were emphasized, with contact information provided for inquiries.

2.3. Variables And Data Measures

The study utilized a structured, self-administered questionnaire consisting of four parts. The first part covered demographic data—age, sex, marital status, education level, work experience, and monthly income—for descriptive purposes. The second part assessed the Nurse Practice Environment Scale (NPES) developed by Lake (2002), containing 31 items across five subscales: (1) nurse participation in hospital affairs, (2) nursing foundations for quality care, (3) nurse manager ability, leadership, and support, (4) staffing and resource adequacy, and (5) collegial nurse–physician relations. Each item was rated on a 4-point Likert scale, with higher scores indicating a more favorable practice environment. The NPES demonstrated high internal reliability (Cronbach's α = .82) and was validated in multiple countries (Lake et al., 2023).

The third section measured Organizational Commitment, adapted from Allen and Meyer (2004), with 18 items divided into three subscales—affective, continuance, and normative commitment—rated on a 5-point Likert scale. Four reverse-coded items were adjusted during data analysis. The tool has shown acceptable reliability (α = .82, .74, and .83 for each subscale). The final section measured Work Engagement using the Utrecht Work Engagement Scale (UWES-9) by Schaufeli and Bakker (2003), validated in Vietnamese context (Tran et al., 2020), consisting of 9 items in three dimensions: vigor, dedication, and absorption. Each item was rated on a 7-point Likert scale, with Cronbach's α ranging from .77 to .93, reflecting high reliability.

The Vietnamese versions of the instruments were produced following Brislin's model of translation and back-translation (Brislin, 1986). Seven experts assessed content validity, yielding content validity indices of 0.96, 0.91, and 0.93 for the NPES, Organizational Commitment, and Work Engagement scales, respectively (Yusoff, 2019). A pilot test involving 30 nurses confirmed reliability with Cronbach's α values of 0.91, 0.86, and 0.91, respectively.

2.4. Statistical Analysis

Data was entered into SPSS version 16 for analysis. Descriptive statistics (frequency, percentage, mean, and standard deviation) summarized the demographic characteristics of respondents. The Shapiro–Wilk test was employed to assess the normality of continuous variables. Since data distributions were non-normal, Spearman's rho correlation was used to test the relationships between the nurse practice environment, organizational commitment, and work engagement. A significance level of α = 0.05 was adopted. Multiple regression analysis was conducted to determine the combined predictive relationship among the three variables.

Weighted means and corresponding verbal interpretations were applied for subscale assessments of each variable to facilitate categorical interpretation.

2.5. Ethical Approval

The study strictly adhered to ethical standards throughout the research process. Ethical clearance was obtained from the Graduate School and Ethics Review Board of Trinity University of Asia and approved by the hospital administrators of the participating sites. Informed consent was secured from all participants prior to participation. Anonymity, privacy, and confidentiality were guaranteed, and no identifying information was collected. Participation was entirely voluntary, with no monetary incentives. The potential risk was minimal and limited to the time spent completing the survey. To avoid any conflict of interest or perceived bias due to the researcher's managerial position, an independent research assistant handled all data collection procedures.

3. RESULTS

Table 1 shows that the mean age of the respondents was 34.08 years, ranging from 22 to 55 years. The majority of the nurses were female (79.6%) and married (79.3%). Regarding work experience, the largest proportion had 5–10 years of experience (38.4%), followed by those with 10–15 years (24.2%). In terms of educational attainment, most respondents held a bachelor's degree (47.0%), while 44.4% had a diploma degree and only a small portion attained a master's or doctoral degree (7.8%). The majority reported a monthly income of 10–15 million VND (58.3%), indicating a moderate-income level consistent with public hospital pay scales in Vietnam. Overall, the demographic profile reflects a predominantly young, experienced, and well-educated nursing workforce in the selected hospitals.

Table 1: Demographic Characteristics of Nurse Respondents (N = 372).

Characteristics	Categories	Frequency (n)	Percentage (%)
Age		Mean = 34.08; Min = 22; Max = 55	
Sex	Male	76	20.4
	Female	296	79.6
Marital status	Single	71	19.1
	Married	295	79.3
	Divorced	4	1.1
	Others	2	0.5
Work experience	< 5 years	71	19.1
	5–10 years	143	38.4
	10–15 years	90	24.2
	> 15 years	68	18.3
Educational qualification	Associate degree	3	0.8
	Diploma degree	165	44.4
	Bachelor's degree	175	47.0
	Master's/Doctoral degree	29	7.8
Average monthly income	5–10 million VND	87	23.4
	10–15 million VND	217	58.3
	15–20 million VND	57	15.3
	> 20 million VND	11	3.0

Table 2 presents the summary of mean scores, interpretations, and reliability coefficients for the major study components and their subscales among 372 respondents. The overall mean score for the Nurse Practice Environment was 3.15, indicating a favorable environment, with subscale means ranging from 3.10 to 3.21 and Cronbach's alpha values between 0.70 and 0.88, showing good internal consistency (α = 0.91). The Organizational Commitment component obtained an overall mean of 3.65, interpreted as high commitment, with subscale means from 3.52 to 3.86 and alpha values between 0.70 and 0.84 (α = 0.86). For Work Engagement, the overall mean was 4.48, corresponding to a highly engaged level, with subscale means ranging from 4.34 to 4.65 and Cronbach's alpha values between 0.84 and 0.92 (α = 0.91). All components demonstrated acceptable to excellent reliability, confirming the internal consistency of the measurement tools used in this study.

Table 2: Summary of Mean Scores, Interpretations, And Reliability Coefficients for Major Components and Subscales (N = 372).

Component	Subscales	Mean	Interpretation	Cronbach's α
Nurse Practice Environment	Nurse Participation in Hospital Affairs	3.12	Favorable environment	0.81
	Nurse Foundation for Quality of Care	3.17	Favorable environment	0.88
	Nurse Manager Ability, Leadership and Support of Nurses	3.21	Favorable environment	0.76
	Staffing and Resource Adequacy	3.10	Favorable environment	0.75
	Collegial Nurse–Physician Relations	3.11	Favorable environment	0.70
	Overall Mean (NPE)	3.15	Favorable environment	0.91
Organizational Commitment	Affective Commitment	3.86	High commitment	0.70
	Continuance Commitment	3.57	High commitment	0.84
	Normative Commitment	3.52	High commitment	0.75
	Overall Mean (OC)	3.65	High commitment	0.86
Work Engagement	Vigor	4.45	Highly engaged	0.92
	Dedication	4.65	Highly engaged	0.86
	Absorption	4.34	Highly engaged	0.84
	Overall Mean (WE)	4.48	Highly engaged	0.91

Table 3 presents the multiple regression analysis of work engagement with nurse practice environment and organizational commitment as predictors. The model explained 35.7% of the variance in work engagement ($R^2 = 0.357$, $F_{2,369} = 103.93$, $p < .001$). Both predictors were significant, with organizational commitment ($\beta = 0.48$, $p < .001$) showing a stronger standardized effect than nurse practice environment ($\beta = 0.19$, $p < .001$). The regression coefficients indicate that increases in both organizational commitment and favorable nurse practice environment were associated with higher levels of work engagement among nurses.

Table 3: Multiple Regression Analysis of Work Engagement with Factors Nurse Practice Environment and Organizational Commitment.

Predictors	***B***	***SE***	β	***t***	***p***
(Constant)	-.23	.35		-.06	.948
Nurse Practice Environment	.47	.12	.19***	3.84	.000
Organizational Commitment	.83	.08	.48***	9.88	.000
$R^2 = .357$, $F_{2, 369} = 103.93$; $p<.001$					

Table 4 and Figure 1 show the multiple regression analysis of work engagement using the subscales of nurse practice environment and organizational commitment. The model accounted for 39.6% of the variance in work engagement ($R^2 = 0.396$, $F_{8,363} = 31.42$, $p < .001$). Significant predictors included affective commitment ($\beta = 0.34$, $p < .001$), nurse participation in hospital affairs ($\beta = 0.235$, $p < .001$), and collegial nurse–physician relationship ($\beta = 0.21$, $p < .01$). Other subscales did not reach statistical significance. The final regression equation can be expressed as:

Work Engagement = 0.34(Affective Commitment) + 0.235(Nurse Participation in Hospital Affairs) + 0.21(Collegial Nurse–Physician Relationship).

Table 4: Multiple Regression Analysis of Work Engagement with Subscales.

Predictors	***B***	***SE***	β	***t***	***p***
Affective Commitment	**.50**	**.08**	**.34*** **	**6.40**	**.000**
Continuance commitment	.15	.08	.11	1.96	.051
Normative commitment	.17	.09	.11	1.72	.085
Nurse participation in hospital affairs	**.51**	**.14**	**.235*** **	**3.5**	**.000**
Nurse f oundation for quality of care	-.26	.19	-.11	-1.41	.16
Nurse manager ability, leadership support of nurse	-.04	.15	-.02	-.28	.77
Staff and resources adequacy	-.16	.13	-.08	-1.20	.23
Collegial-Nurse-Physician relation	**.43**	**.12**	**.21****	**3.47**	**.001**

R^2 = .396, $F_{8, 363}$ = 31.42; $^{**}p<.01$; $^{***}p<.001$

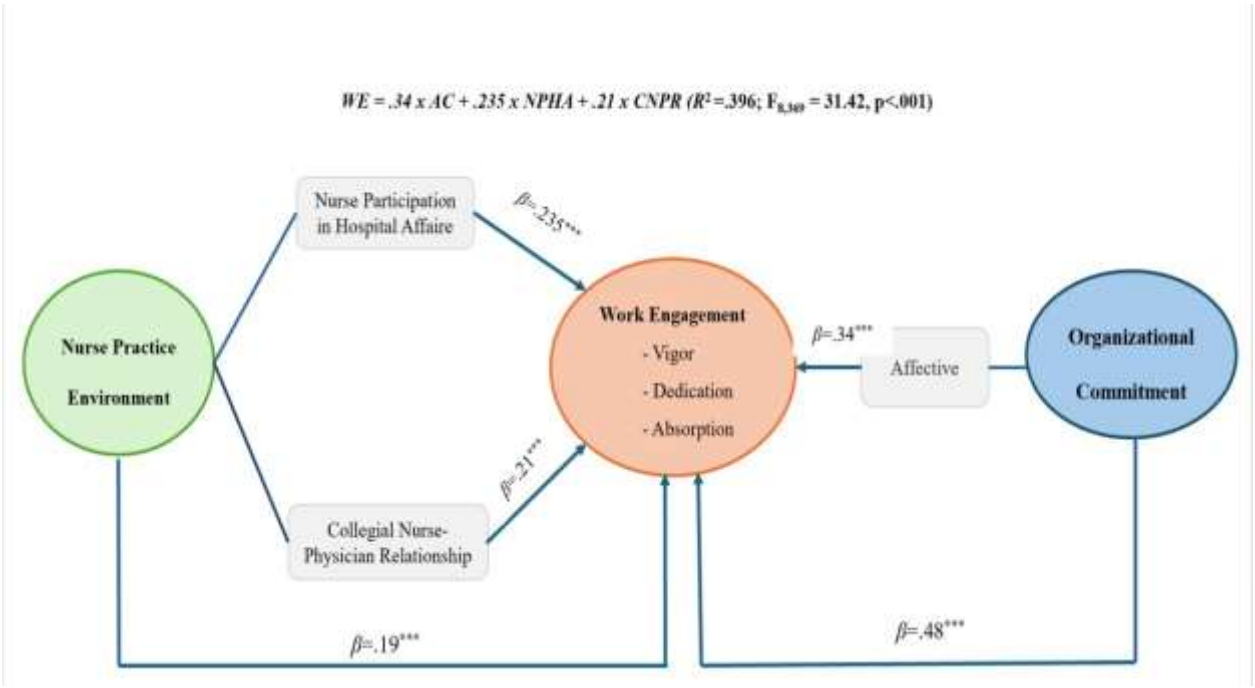

Figure 1: Structure Model of Work Engagement on Subscale of Nuse Practice Environment and Organizational Commitment.

4. DISCUSSION

The findings of this study revealed that nurses working in selected government hospitals in Hanoi experienced a favorable nurse practice environment, high levels of organizational commitment, and strong work engagement. Specifically, the overall mean score for the nurse practice environment (NPE) was 3.15, indicating a generally favorable perception, while organizational commitment (OC) averaged 3.65, showing a high level of commitment. Work engagement (WE) demonstrated the highest overall mean of 4.48, suggesting that nurses were highly engaged in their work. Reliability coefficients across all components were strong (Cronbach's α ranging from 0.70 to 0.91), reflecting the consistency of measurement. These results suggest that, despite challenges in the healthcare system, nurses in these institutions remain motivated, committed, and positively oriented toward their professional roles.

Within the nurse practice environment, all subscales were rated as favorable, with the highest mean score found in "Nurse Manager Ability, Leadership, and Support of Nurses" (M = 3.21), followed by "Nurse Foundation for Quality of Care" (M = 3.17), and the lowest in "Staffing and Resource Adequacy" (M = 3.10). These findings indicate that nurses perceived strong leadership and managerial support as central to maintaining a positive work climate, even when staffing shortages and resource constraints persisted. Such results are consistent with earlier research emphasizing that effective leadership fosters empowerment, communication, and a sense of belonging among nurses, which enhances job satisfaction and performance (Decuypere & Schaufeli, 2020).

Organizational commitment among nurses was notably high across all subscales, particularly in affective commitment (M = 3.86), implying that nurses maintained an emotional attachment and sense of loyalty to their hospitals. This strong affective bond suggests that many nurses view their hospitals not merely as workplaces but as organizations they identify with personally and professionally. Continuance and normative commitment were also high (M = 3.57 and 3.52, respectively), reflecting both the practical necessity of remaining in stable employment and a moral sense of obligation toward the organization. Such levels of commitment highlight the collectivist cultural context in Vietnam, where long-term dedication and loyalty to one's institution are valued traits.

Work engagement levels were exceptionally high among respondents, with the overall mean reaching 4.48. Among its dimensions, dedication achieved the highest score (M = 4.65), followed by vigor (M = 4.45) and absorption (M = 4.34). This pattern indicates that nurses derived substantial inspiration, enthusiasm,

and pride from their work, even under demanding conditions. The high level of engagement reflects the strong professional identity and intrinsic motivation of nurses in tertiary hospitals, where clinical complexity and patient acuity require continuous learning and adaptability. Consistent with previous studies (Falguera et al., 2021), such high engagement correlates with improved patient care quality, reduced burnout, and stronger organizational performance.

The regression analysis further demonstrated that both nurse practice environment and organizational commitment significantly predicted work engagement, jointly explaining 35.7% of its variance ($R^2 = 0.357$, $F_{2,369} = 103.93$, $p < .001$). Organizational commitment ($\beta = 0.48$, $p < .001$) exerted a stronger influence than the nurse practice environment ($\beta = 0.19$, $p < .001$). This finding implies that emotional and attitudinal attachment to the organization plays a more decisive role in sustaining nurses' engagement than environmental conditions alone. Nevertheless, a favorable work environment remains an essential contextual factor that nurtures and sustains this engagement by supporting professional growth and collaboration.

A deeper examination of the subscale predictors in Table 4 provided further insights into the specific elements driving engagement. The refined regression model accounted for a larger portion of variance in work engagement ($R^2 = 0.396$, $F_{8,363} = 31.42$, $p < .001$). Among the predictors, affective commitment ($\beta = 0.34$, $p < .001$) emerged as the strongest determinant, followed by nurse participation in hospital affairs ($\beta = 0.235$, $p < .001$) and collegial nurse–physician relationships ($\beta = 0.21$, $p < .01$). These factors highlight the critical interplay between emotional attachment, participative governance, and interprofessional collaboration in shaping nurses' engagement.

The influence of affective commitment underscores the psychological dimension of engagement—nurses who feel emotionally connected to their organizations tend to exhibit greater energy, enthusiasm, and focus in their daily work. When individuals perceive alignment between their personal values and organizational goals, they are more likely to invest extra effort, display resilience under pressure, and experience fulfillment from their professional contributions (Allen & Meyer, 2004; Orgambídez et al., 2019). Enhancing affective commitment through recognition, empowerment, and supportive leadership may thus serve as a pivotal strategy for improving work engagement.

Participation in hospital affairs also proved to be a meaningful predictor of engagement. Nurses who are actively involved in decision-making processes feel more empowered, respected, and valued by their institutions. This sense of agency not only strengthens their organizational identification but also reinforces their willingness to contribute creatively and responsibly. These findings are consistent with the principles of shared governance, which emphasize the inclusion of nurses in hospital committees and policy development to enhance accountability and job satisfaction (Al Hamdan et al., 2021).

Moreover, the significant role of collegial nurse–physician relationships reflect the importance of interprofessional collaboration in maintaining a positive psychosocial work climate. Constructive teamwork and mutual respect between nurses and physicians are essential for ensuring communication efficiency, patient safety, and morale among healthcare staff. When nurses experience professional recognition from physicians and a sense of partnership in patient care, they are more likely to be enthusiastic, focused, and committed to organizational goals (Boev, 2021; Gabriel et al., 2020).

The findings of this study have important implications for nursing management and hospital administration in Vietnam and similar healthcare contexts. Since organizational commitment—particularly affective commitment—was the strongest predictor of work engagement, hospital leaders should prioritize strategies that strengthen nurses' emotional connection and sense of belonging within their institutions. This may include recognition programs, transparent communication, and career development pathways that align individual goals with organizational values. Additionally, promoting nurse participation in hospital affairs and fostering collegial nurse–physician relationships can enhance empowerment and collaboration, leading to higher engagement and job satisfaction. Improving leadership capacity and maintaining a favorable nurse practice environment are therefore essential strategies for sustaining workforce stability, reducing turnover intention, and improving the quality and safety of patient care.

This study, however, is not without limitations. The data were collected through self-reported questionnaires, which may be subject to response bias or social desirability effects, particularly in hierarchical settings like government hospitals. The cross-sectional design also limits the ability to infer causality between the predictors and work engagement. Moreover, the study was conducted in

selected tertiary hospitals in Hanoi, which may not fully represent nurses working in provincial or private healthcare facilities across Vietnam. Future research using longitudinal or mixed-method approaches, with more diverse hospital settings, would provide a deeper understanding of causal relationships and contextual influences on nurse engagement and commitment.

5. CONCLUSION

In summary, the results of this study demonstrate that a supportive nurse practice environment and strong organizational commitment are crucial predictors of nurse work engagement. Among these, affective commitment, nurse participation in hospital affairs, and collegial nurse–physician relationships emerged as the most influential subfactors. These findings reinforce the need for hospital administrators and nurse leaders to promote inclusive leadership practices, transparent communication, and professional recognition systems to cultivate engagement. By strengthening these dimensions, hospitals can foster a more motivated, loyal, and high-performing nursing workforce, ultimately leading to better patient outcomes and institutional sustainability.

REFERENCES

Al-Hamdan, Z., Oweidat, I. A., Al-Faouri, I., & Codier, E. (2021). Correlating practice environment and job performance among Jordanian hospitals' registered nurses. *Nursing Forum, 52*(1), 12–20. https://doi.org/10.1111/nuf.12160

Allen, N. J., & Meyer, J. P. (2004). *TCM employee commitment survey academic users guide 2004.* The University of Western Ontario, Department of Psychology.

Boev, P. D. (2021). Communication between health care professionals: A clinical intervention pilot study. *International Journal of Caring Sciences, 8*(3), 530–535.

Brislin, R. W. (1986). The wording and translation of research instruments. In W. J. Lonner & J. W. Berry (Eds.), *Field methods in cross-cultural research* (pp. 137–164). Sage Publications, Inc.

Committee of the Central Party (2017). *The 6th Meeting of the 12th Central Committee on Enhancement of Citizens' Health Protection, Improvement, and Care in the New Situation.* Central Committee of Vietnam.

De Los Santos, J. A. A., & Labrague, L. J. (2021). Job engagement and satisfaction are associated with nurse caring behaviours: A cross-sectional study. *Journal of Nursing Management, 29*(7), 2234–2242. https://doi.org/10.1111/jonm.13384

Decuypere, A., & Schaufeli, W. (2020). Leadership and work engagement: Exploring explanatory mechanisms. *German Journal of Human Resource Management, 34*(1), 69–95.

Falguera, C. C., De los Santos, J. A. A., Galabay, J. R., Firmo, C. N., Tsaras, K., Rosales, R. A., … Labrague, L. J. (2021). Relationship between nurse practice environment and work outcomes: A survey study in the Philippines. *International Journal of Nursing Practice, 27*(1), e12873.

Gabriel, P. R., Taylor, P. P., & Urwin, P. M. (2020). Human factors and psychological safety as patient safety predictors. *BMJ Quality & Safety Journal, 23*(3), 196–205.

Lake, E. T. (2002). Development of the practice environment scale of the Nursing Work Index. *Research in Nursing & Health, 25*(3), 176–188. https://doi.org/10.1002/nur.10032

Lake, E. T., Rosenbaum, K. E. F., Sauveur, C., Buren, C., & Cho, P. (2023). Translations of the Practice Environment Scale of the Nursing Work Index: A systematic review. *Nursing & Health Sciences, 25*(3), 365–380.

Lake, E. T., Sanders, J., Duan, R., Riman, K. A., Schoenauer, K. M., & Chen, Y. (2019). A meta-analysis of the associations between the nurse work environment in hospitals and four sets of outcomes. *Medical Care, 57*(5), 353–361.

Ni, Y. X., Wen, Y., Xu, Y., He, L., & You, G. Y. (2023). The relationship between work practice environment and work engagement among nurses: The multiple mediation of basic psychological needs and organizational commitment. *Frontiers in Public Health, 11*, 1123580. https://doi.org/10.3389/fpubh.2023.1123580

Orgambídez, A., Borrego, Y., & Vázquez-Aguado, O. (2019). Self-efficacy and organizational commitment among Spanish nurses: The role of work engagement. *International Nursing Review, 66*(3), 381–388.

Phan, Q. T., & Doan, H. H. (2019). Factors affecting work engagement among health care staff in government hospitals in Ho Chi Minh City. Retrieved from https://sti.vista.gov.vn/tw/Pages/tai-lieu-khcn.aspx?ItemID=274077

Schaufeli, W. B., & Bakker, A. B. (2003). Utrecht Work Engagement Scale: Preliminary manual. Utrecht University, Occupational Health Psychology Unit.

Tran, T. T. T., Watanabe, K., Imamura, K., Nguyen, H. T., Sasaki, N., Kuribayashi, K., … Nguyen, Q. T. (2020). Reliability and validity of the Vietnamese version of the 9-item Utrecht Work Engagement Scale. *Journal of Occupational Health, 62*(1), e12157.

Van Minh, D., Akkadechanunt, T., & Chitpakdee, B. (2019). Job demands, job resources and work engagement among nurses in tertiary care hospitals, Thanh Hoa Province, Vietnam. *International Journal of Nursing Practice, 25*(6), e12799.

Vu, T. H. L., & Luong, T. M. C. (2021). Organizational commitment among health care workers at Song Hinh District Health Care Center, Phu Yen Province. *The Vietnamese Medical Journal, 502*(1).

Wan, Q., Li, Z., Zhou, W., & Shang, S. (2018). Effects of work environment and job characteristics on the turnover intention of experienced nurses: The mediating role of work engagement. *Journal of Advanced Nursing, 74*(6), 1332–1341. https://doi.org/10.1111/jan.13528

Warshawsky, I. V. (2021). *Work climate and job opportunities: The modern approach*. *Clinical Risk, 16*(5), 173–175.

⚠ *Note: Title appears to be a journal article but lacks clarity; please verify whether this is a book or article.*

Woods, B. C., & Early, R. Y. (2020). Organizational commitment associated with the competent nursing environment. *Journal of Applied Research, 44*(3), 294–314.

Wushe, T., & Shenje, J. (2019). The antecedents of employee engagement and their effect on public sector service delivery: A case study of government departments in Harare. *SA Journal of Human Resource Management, 17*(1), Article a1094. https://doi.org/10.4102/sajhrm.v17i0.1094

Yusoff, M. S. B. (2019). ABC of content validation and content validity index calculation. *Education in Medicine Journal, 11*(2), 49–54.

Yusoff, M. S. B. (2019). ABC of content validation and content validity index calculation. *Education in Medicine Journal, 11*(2), 49–54. https://doi.org/10.21315/eimj2019.11.2.6

Zahari, N., & Kaliannan, M. (2023). Antecedents of work engagement in the public sector: A systematic literature review. *Review of Public Personnel Administration, 43*(3), 557–582. https://doi.org/10.1177/0734371X221086954

Zawawi, A., Putrawan, I. M., & Engineering, E. (2019). Linking leadership styles and organizational culture to organizational commitment in the automotive components industry: The mediating role of procedural justice. *International Journal of Innovative Technology and Exploring Engineering, 8*(6), 48–54.

Zhou, H., & Gong, Y. H. (2020). Relationship between work engagement and occupational stress among operating theatre nurses in China: A questionnaire survey. *Journal of Nursing Management, 28*(2), 328–336. https://doi.org/10.1111/jonm.12901

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Author Contributions: NTHG conceived and designed the study, obtained ethical approvals and site permissions, supervised the project, and drafted the manuscript. BMT and DTB coordinated participant recruitment, administered the survey, and curated the data. VDT performed the statistical analyses and prepared the tables/figures. TVO contributed to study methodology and instrument adaptation/validation and provided project supervision. All authors (NTHG, BMT, DTB, VDT, TVO) critically revised the manuscript

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