A Model for Enhancing and Developing the Quality of Work Life for Nurses in the Eastern Thailand

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Abstract

This research aimed to: 1) examine key factors influencing the quality of work life among nurses in Eastern Thailand, and 2) develop a model to enhance their quality of work life. The study focused on professional nurses working in hospitals across Rayong, Chonburi, Chanthaburi, and Trat provinces. A total of 500 participants were selected, equally divided between government and private hospitals.

A mixed-methods research design was employed. Quantitative data were collected using questionnaires, while qualitative insights supported the analysis. Descriptive and inferential statistics were used alongside multiple correlation analysis. Structural equation modeling (SEM) was performed using AMOS to test the research hypothesis and assess the model's fit. The results indicated that both hospital types viewed the proposed model as highly important, though government hospitals placed significantly higher importance on all aspects ($p < 0.05$). The SEM analysis demonstrated an excellent model fit with the empirical data: CMIN-p = 0.140, CMIN/DF = 1.119, CFI = 0.966, and RMSEA = 0.015. These results confirm that the model meets standard evaluation criteria.

Keywords: Quality of work life; Nurses; Model development

Introduction

The global shortage of nurses is exerting significant pressure on healthcare systems worldwide. As the backbone of healthcare delivery, nurses are vital to ensuring efficient and effective patient care. According to the World Health Organization, this shortage poses a serious obstacle to providing essential health services and achieving sustainable development goals, especially in countries where the demand for healthcare professionals is high.

In Thailand, the situation is no different. The healthcare system is burdened by a chronic shortage of nurses, particularly in public hospitals. Excessive workloads, long working hours, and emotional stress contribute to burnout and fatigue among nurses. Many are forced to care for an overwhelming number of patients without sufficient support or fair compensation. Moreover, as a large portion of the nursing workforce approaches retirement, the profession is also facing issues of retention and declining capacity. The Nursing Council of Thailand reports that nearly 48.86% of newly graduated nurses resign from their positions, with an average annual loss of 7,000 nurses, despite the system producing approximately 10,000 new nurses each year. The root of the problem lies not in the production of nurses, but in the inability to retain them within the healthcare system.

This issue is particularly severe in Thailand's Eastern region, a major economic and industrial hub that is experiencing rapid population growth due to labor migration. Hospitals in this region are facing a mounting crisis in terms of readiness to handle patient loads, foreign patients, and legal risks associated with treatment. Nurses report insufficient equipment, unpredictable shifts, mental and physical strain, and legal vulnerabilities, all of which negatively affect their quality of work life (QWL).

Previous studies, such as Makma, Junprasert and Krungkraipetch (2022), have identified key factors influencing quality of work life (QWL), including health status and supervisory support and community involvement. These elements highlight the urgent need for a comprehensive model to support nurses' well-being. Administrators must recognize that improving nurses' QWL is not only an ethical responsibility but also a strategic necessity for sustaining healthcare service quality and workforce stability.

This study therefore seeks to: (1) identify the critical factors influencing nurses' quality of work life in Eastern Thailand, and (2) develop a practical model for enhancing their work life. Through this, the research aims to address existing knowledge gaps and offer solutions tailored to the regional context—where the impact of nurse shortages is most acute.

Research Objectives

1. To examine the factors that influence the quality of work life for nurses in both public and private hospitals in the Eastern region.

2. To develop a model aimed at enhancing the quality of work life for nurses in the Eastern region.

Literature Review

Quality of Nursing Work Life (QNWL)

The Quality of Nursing Work Life (QNWL) directly influences job satisfaction, which in turn impacts both the efficiency and quality of patient care. Nurses' satisfaction and well-being are shaped by various factors, including job tasks, job design, and work-life balance (Rashmi &; Kataria, 2023). Achieving a balance between work and personal life is essential for overall well-being. Several studies have shown that factors like personal, professional, social, and psychological influences significantly affect QNWL and contribute to stress, which can diminish job satisfaction and performance (Sibuea, Sulastiana & Fitriana, 2024; Rohmayanti & Wijayanti, 2023).

Psychological Factors

Psychological factors have a significant impact on nurses' work life and the quality of their interactions with patients and colleagues. Stress and interpersonal conflict can impair social relationships, leading to anxiety and hostility (Vallone & Zurlo, 2024). On the other hand, positive relationships and effective communication with colleagues and supervisors reduce stress and foster a supportive environment (Alina & Suroso, 2024). Furthermore, the quality of relationships with patients significantly affects care outcomes, particularly in trust-based healthcare settings such as HIV care (Abraham & Clow, 2023). However, chronic psychological stress may also contribute to burnout, leading to a decrease in job satisfaction and quality of social and physical interactions (Adamopoulos & Syrou, 2022). Based on these findings, the following hypotheses are proposed:

H1: Psychological factors directly influence social relationship factors.

H2: Psychological factors directly influence physical relationship factors.

Environmental factors

Environmental factors, including workplace conditions, significantly impact both physical and mental health. For example, operating room nurses are exposed to radiation and chemicals, which increase physical stress (Saravanan et al., 2023). Additionally, the psychosocial climate in healthcare settings can influence nurses' mental health; positive coworker relationships promote a

supportive environment, while negative interactions contribute to stress and job dissatisfaction (Alina, Vaidas & Migle, 2024). Improving environmental conditions, therefore, not only reduces physical health risks but also promotes psychological well–being. Individual resilience and coping strategies also help alleviate some of the negative effects (Patrician et al., 2022). The following hypotheses are proposed:

H3 : Environmental factors directly influence physical factors.

H4 : Environmental factors directly influence psychological factors.

Physical factors

Physical factors play a crucial role in shaping nurses' social relationships and overall well–being. Strong social support networks, including from family and colleagues, can mitigate physical limitations and promote better health outcomes (Cho et al., 2023; Zhang et al., 2023). Furthermore, emotional support from colleagues and loved ones contributes to mental well–being and helps nurses manage physical challenges. This emphasizes the importance of social connections in nursing care, as they buffer against both physical and mental health challenges (Antoli–Jover et al., 2024). The following hypothesis is proposed:

H5: Physical factors directly influence social relationship factors.

The quality of work life for nurses is positively correlated with their work performance and organizational loyalty. Poor QNWL can negatively affect nurses' job performance, ultimately impacting patient care. Given the dynamic nature of the nursing work environment, stress plays a significant role in shaping QNWL, which in turn influences work performance and patient care. Developing models that enhance nurses' QNWL is crucial for improving both their performance and their overall well–being. However, further research is needed to understand the complex relationships between these factors in different healthcare contexts (Al–Dossary, 2022).

Conceptual Framework

This research is a research study A model for Enhancing and Developing the Quality of Work Life for Nurses in the Eastern Thailand the details are as follows.
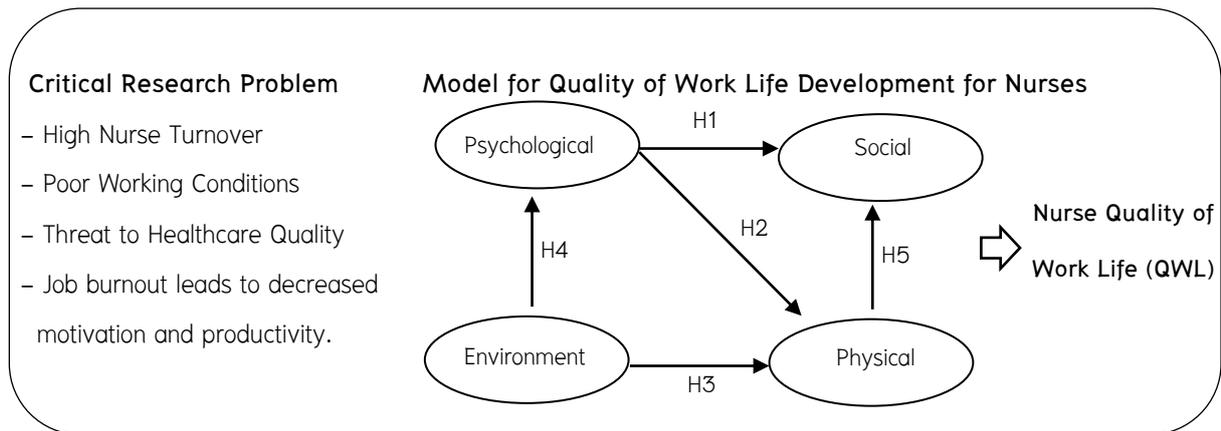
Figure 1 Conceptual framework of the research.

Research Methodology

This research is a quantitative study that aims to develop a model for enhancing and improving the quality of work life for nurses in the Eastern region of Thailand. The study employs a descriptive and correlational research design and uses Structural Equation Modeling (SEM) to analyze the relationships between key factors affecting nurses' work life.

Methods:

1. Population and Sample:

The population consists of 9,896 professional nurses working in the Eastern region, including the provinces of Chanthaburi, Chachoengsao, Chonburi, Trat, Prachinburi, Rayong, and Sa Kaeo. Using the Taro Yamane formula, the sample size was calculated to be 383, but to ensure robustness, the sample was increased to 500. The sample was selected using a multi-stage sampling method, with 250 nurses from government hospitals and 250 from private hospitals.

2. Development of Research Instruments:

A questionnaire was developed based on the Work–Related Quality of Life (WRQoL) model by Ferreira et al. (2023). The instrument included four parts: general information, hospital operations characteristics, a 52–item assessment on factors influencing nurses' quality of life, and a section for suggestions.

3. Data Collection:

Content validity of the instruments was verified by three experts, resulting in an Index of Item–Objective Congruence (IOC) between 0.60 and 1.00. Reliability was tested using a sample of

30 participants, and Cronbach's alpha coefficients ranged from 0.73 to 0.95, confirming high reliability.

4. Data Analysis:

Descriptive statistics were used to analyze the frequency and mean values. A t–test was employed for comparative analysis between groups, and Structural Equation Modeling (SEM) was used for multivariate analysis through the AMOS software.

This approach provides a comprehensive understanding of the factors influencing nurses' work life and proposes a model for enhancing their well–being in the Eastern region.

Research Results

Objective 1 The results showed the analysis of factors affecting the quality of working life of nurses in government and private hospitals revealed an overall high level of importance ($\overline{X}$= 4.22, S.D. = 0.24). Upon examining each aspect individually, all factors were rated highly, with the following rankings from highest to lowest: Social relationships were deemed most important, with an average of 4.26 (S.D. = 0.30); Psychological factors followed closely with an average of 4.23 (S.D. = 0.32); Physical factors were also rated highly, with an average of 4.21 (S.D. = 0.30); and Environmental factors had an average of 4.17 (S.D. = 0.29 When analyzing the results from private hospitals, the overall importance was similarly high, with an average of 4.25 (S.D. = 0.24). Each aspect was rated highly, ranked as follows: Social relationships had the highest rating of 4.30 (S.D. = 0.30), followed by psychological factors at 4.26 (S.D. = 0.32), physical factors at 4.24 (S.D. = 0.29), and environmental factors at 4.20 (S.D. = 0.28). These results are summarized in Table 1. 4. Environmental factors

Table 1 Mean and standard deviation of the importance level of factors affecting overall quality of life of nurses and classified by factor.

Variables	Medium and Small–Sized			Large–Sized		Different Comparison	
	$\overline{X}$	S.D.	Importance	$\overline{X}$	S.D.	t–value	P–value
Overall Importance Level	4.19	0.24	High	4.25	0.24	–1.95	0.00*
1. Psychological factor	4.20	0.33	High	4.26	0.32	–2.34	0.00*
2. Physical factors	4.18	0.30	High	4.24	0.29	–2.18	0.00*
3. Social factors	4.23	0.31	High	4.30	0.30	–2.44	0.00*
4. Environmental factors	4.15	0.29	High	4.20	0.28	–2.76	0.00*

Statistically significant at the 0.05 level.

Objective 2 The results showed the results from the structural equation modeling analysis indicated that the Chi-square probability (CMIN-p) was 0.140, which is greater than 0.05. The Chi-Square to Degrees of Freedom Ratio (CMIN/DF) was 1.119, which is below the threshold of 2.00. The Comparative Fit Index (CFI) was 0.966, which exceeds the recommended value of 0.90, and the Root Mean Square Error of Approximation (RMSEA) was 0.015, which is below the 0.08 threshold, as suggested by Arbuckle (2016). These results are summarized in Figure 2 and Table 2.
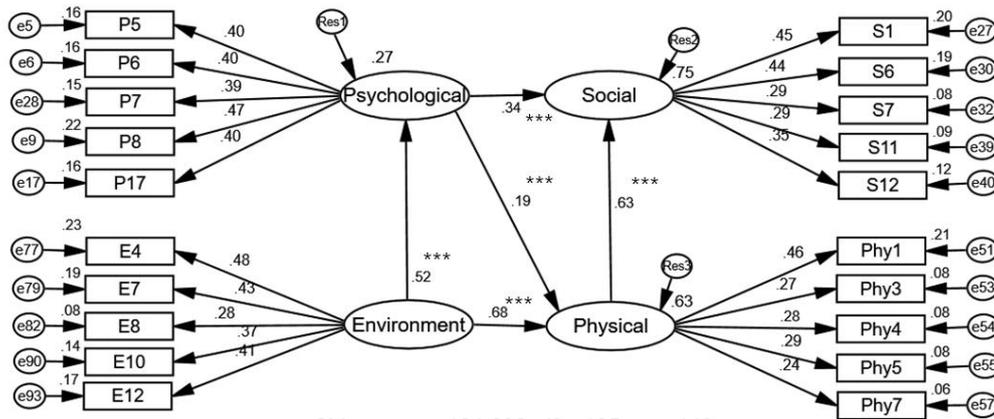

Figure 2 Structural Equation Modeling

Table 2 Observational Variables

	Description	Loading	Variance	R^2
Psychological				
P5	I feel a sense of pride in myself every time I care for and help a patient recover from a life-threatening condition.	0.40	0.16	0.27
P6	Proud of every success in my work while caring for patients.	0.40	0.16	
P7	Satisfaction in working well with colleagues during the pandemic.	0.39	0.15	
P8	I am inspired to provide the best initial care for infectious patients.	0.47	0.22	
P17	I am ready to face challenges and the risks of pandemics.	0.40	0.16	
Social				0.75
S1	The team supporting the patients is a key factor in this success.	0.45	0.20	
S6	I worry about treating infectious patients and fear spreading the virus to my family.	0.44	0.19	
S7	You and your team consistently manage and resolve on-site issues successfully.	0.29	0.08	
S11	The organization fosters a culture that promotes respect for personal rights.	0.29	0.09	
S12	I am loyal to the organization and eager to share its reputation with others.	0.35	0.12	

Environment				
E4	The hazard pay was delayed and accumulated for a long time.	0.48	0.23	
E7	The crisis of chronic patients has impacted the work, requiring continuous effort.	0.43	0.19	
E8	The department has fewer staff than the workload, exceeding the capacity of the team.	0.28	0.08	
Environment				
E10	The high number of patients requires overtime, increasing the total working hours.	0.37	0.14	
E12	During the outbreak, you didn't have the chance to rest with your family.	0.40	0.17	
Physical				0.63
Phy1	The work involves excessive risks that could harm health.	0.46	0.21	
Phy3	There is constant concern about the risks involved in daily tasks.	0.27	0.08	
Phy4	The workload assigned is too much to handle.	0.28	0.08	
Phy5	My health is strong and ready during the time of receiving patients.	0.29	0.08	
Phy7	Frequent changes in the shift schedule cause anxiety and difficulty in adjusting.	0.24	0.06	

Results of Hypothesis Testing

The results were consistent with the hypotheses, as outlined in Table 3.

Table 3 The results of hypothesis testing.

	Research Hypotheses	Directly Influence	Results
H1	Psychological factors directly influence social relationship factors.	0.34	Accepted
H2	Psychological factors directly influence factors	0.19	Accepted
H3	Environmental factors have a direct influence on physical factors.	0.68	Accepted
H4	Environmental factors have a direct influence on psychological factors.	0.52	Accepted
H5	Physical factors have a direct influence on social relationship factors.	0.63	Accepted

Discussions of Results and Research Recommendations

This research aimed to identify factors influencing the quality of life of nurses in the Eastern region and to develop a model to improve it. The key findings align with the research objectives and underscore several significant issues affecting nurses' work life.

Key Findings:

1. Work Environment and Mental Health: The results from research objective 1 indicate that nurses' work environment–especially issues like stress, anxiety, and depression–significantly affects their quality of life. These challenges lead to reduced work performance and negatively

impact the healthcare team, which aligns with findings from Maslach and Leiter (2017) and Dall'Ora et al., (2020) on burnout syndrome. The consequences of burnout, such as exhaustion, negative thoughts, and fatigue, diminish professional efficiency and strain relationships at work (Li et al., 2020). These findings emphasize the importance of addressing psychological well-being in the workplace.

2. Social and Psychological Factors: The study revealed that social relationships within the healthcare team play a crucial role in overall job satisfaction and quality of life. Psychological factors such as delayed compensation and stress contribute significantly to these challenges. Yan et al., (2022) highlights that addressing burnout through management models that focus on value creation, rewards, and team dynamics is essential for improving nurses' quality of life.

3. Confirmatory Factor Analysis (CFA) Results: For research objective 2, confirmatory factor analysis (CFA) was used to develop a model for improving the quality of life of nurses. The structural equation model was tested and showed a good fit, confirming the relationships between the latent variables. This supports the findings of Elshaer et al. (2018) and Jun et al. (2021), who emphasized the need for psychological support for nurses facing critical stress.

Hypothesis Findings:

H1: Psychological Factors Influence Social Relationships: The analysis indicated that stress and burnout directly affect the ability of nurses to maintain healthy social relationships at work, corroborating studies by Sonmez et al. (2023) and Dall'Ora et al. (2020). Emotional support from colleagues and organizations is essential in reducing stress and improving team dynamics (Cohen, Drach-Zahavy & Srulovici, 2024).

H2: Psychological Factors Influence Physical Relationships: Psychological well-being also significantly impacts physical relationships, particularly in patient care settings. Drach-Zahavy (2024) found that emotional support strengthens nurse-patient relationships, while stress can undermine this dynamic. Forster et al. (2020) also found that physical touch in caregiving is important for fostering trust and cooperation.

H3: Environmental Factors Influence Physical Aspects: Environmental factors such as inadequate lighting, noise, and poor ventilation directly affect both nurses' health and the quality of patient care. Stimpfel et al. (2019) and Ulrich et al. (2022) confirm that a supportive work environment, including adequate resources and ergonomic design, improves nurse efficiency and reduces physical strain.

H4: Environmental Factors Influence Psychological Well–Being: High–stress environments contribute to burnout and mental fatigue, as noted by Dall'Ora et al. (2020) and Cho et al. (2023). Supportive work environments, such as having rest areas and organizational support, can alleviate stress and improve job satisfaction (Ulrich et al., 2022).

H5: Physical Factors Influence Social Relationships: Physical conditions, such as overcrowding and noise, can hinder communication and collaboration, which are essential for fostering social relationships within the nursing team. Studies by Stimpfel et al. (2019) and Velando–Soriano et al. (2020) show that physical strain and heavy workloads lead to burnout, negatively impacting social interactions. Reducing physical burdens and providing a supportive environment strengthens relationships and improves team collaboration (Nabizadeh–Gharghozar et al., 2020; Abdullah et al., 2021).

Broader Implications:

The findings of this research underscore the importance of addressing both psychological and environmental factors to improve nurses' quality of life. Providing adequate support, reducing work–related stress, and improving work conditions are critical steps in enhancing nurses' well–being and professional performance. Future efforts should focus on implementing comprehensive management models that address burnout and foster a supportive work environment, ensuring that nurses can perform their roles effectively and sustainably.

This study contributes to the growing body of knowledge on nurse well–being and offers practical recommendations for healthcare administrators to enhance the quality of life for nurses, ultimately improving patient care and the overall healthcare system.

Knowledge from the Research

The diagram summarizes the key factors affecting nurses' quality of work life, including psychological, physical, and environmental influences. It highlights the importance of a supportive work environment and effective management to reduce stress and burnout, ultimately improving nurse well–being and care quality.
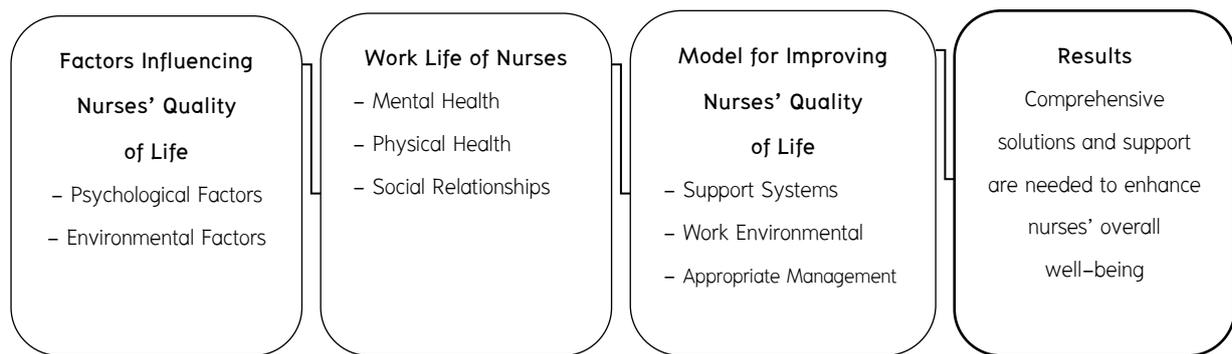
Factors Influencing Nurses' Quality of Life – Psychological Factors – Environmental Factors	Work Life of Nurses – Mental Health – Physical Health – Social Relationships	Model for Improving Nurses' Quality of Life – Support Systems – Work Environmental – Appropriate Management	Results Comprehensive solutions and support are needed to enhance nurses' overall well-being

Figure 3 Diagram of knowledge from the research

Conclusion

In conclusion, the quality of work life for nurses in the Eastern region of Thailand is significantly influenced by psychological, physical, and environmental factors. Addressing these factors through strategic management and organizational support is crucial for improving nurses' well-being and ensuring high-quality patient care. The proposed model offers a framework for healthcare administrators to improve work conditions and reduce burnout, ultimately leading to better outcomes for both nurses and patients. Future research should explore the implementation of this model and assess its effectiveness in other regions.

Suggestions

1. Recommendations from the Research

1.1 Motivation and Well-Being: Motivation drives optimal patient care by aligning aspirations with achievements. It's important to consider individual needs and capabilities, ensuring overall well-being and recognizing limitations.

1.2 Empowerment and Teamwork:

– Team Collaboration: Foster strong social relationships, emphasizing teamwork for patient care success.

– Self-Empowerment: Promote goal-setting and responsibility for patient well-being, embracing challenges and flexibility.

–Collective Responsibility: Encourage pride in patient care and prioritize safety.

–Facing Challenges: Cultivate courage to tackle challenges and address concerns, especially in high-risk environments.

1.3 Organizational Support: Effective leadership involves:

– Providing open communication and transparency.

– Ensuring fairness in compensation and rewards.

– Prioritizing health and safety.

– Supporting flexible schedules and resources.

– Listening to employees and boosting morale through praise and reward

2. Recommendations for Future Research

2.1 Quality of Life Factors: Research should examine additional factors affecting quality of life, categorized by job position, to gain specific insights for different professional groups in hospital settings during crises.

2.2 Research Methods: Future studies should use diverse methods like qualitative research and virtual simulations for unique insights beyond traditional surveys.

New Findings

The S–C–W–I–F–T Model aims to enhance nurses' quality of life by addressing six key components:

S = Social Relationships: Building supportive networks through team activities and community engagement.

C = Career Development: Providing opportunities for skill growth, learning, and career advancement.

W = Work Environment: Ensuring a safe, comfortable workspace with reduced injury risk and effective use of technology.

I = Individual Well-being (Physical & Mental Health): Promoting physical health, stress management, and work-life balance.

F = Financial Well-being: Offering fair compensation and comprehensive benefits to reduce financial stress.

T = Team Collaboration: Encouraging effective teamwork and cooperation within the healthcare team.

This model supports nurses by fostering a balanced, supportive environment, leading to job satisfaction, reduced burnout, and improved patient care. Regular evaluations ensure it meets evolving needs in different healthcare settings.

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