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REVISITING THE SUPPORT-ENGAGEMENT DYNAMICS: WORK ENGAGEMENT AS A KEY DRIVER OF ORGANISATIONAL SUPPORT AND NURSE WELL-BEING IN A THAI HOSPITAL SETTING

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Abstract

This study re-examines the relationship between Quality of Nursing Work Life (QNWL), Work Engagement (WE), Perceived Organizational Support (POS), and Work Happiness (WH) among nurses in a Thai hospital setting. Addressing the global challenge of nurse retention and its impact on quality of care, this research investigates WE as a primary driver of POS. Data from 100 nurses were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM), revealing a model where QNWL significantly enhances WE. Subsequently, WE positively influences POS and contributes to WH. These findings challenge traditional views by highlighting the pivotal role of WE in shaping perceptions of organizational support. The implications suggest that hospital administrators prioritize initiatives fostering WE to create a supportive environment that promotes nurse well-being and job satisfaction. This study contributes to the sustainable organization literature by underscoring the need to revisit existing assumptions about support-engagement dynamics in healthcare settings.

Keywords: Nurse Well-being, Work Engagement, Organizational Support, Quality of Work Life, Healthcare Management

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Introduction

Workplace happiness (WH) is paramount in organizational psychology, particularly in healthcare, where pressure and short staffing are challenging (Huang et al., 2023). Emotional exhaustion is a frequent event that nurses are exposed to, leading to the necessity of studying practical issues related to their well-being (Zhang et al., 2025). Among these factors, the quality of nursing work life (QNWL)—encompassing equitable compensation, opportunities for career advancement, work-life balance, and a nurturing environment—has been correlated with WH (Swamy et al., 2015). Nevertheless, the evidence linking QNWL to WH, especially in developing nations like Thailand, remains sparse (Sahni, 2019; Thakral et al., 2025).

Recent studies indicate that work engagement (WE) and perceived organizational support (POS) serve as significant psychological mechanisms that influence workforce health (WH) (Mascarenhas et al., 2022; Wang et al., 2017). Work engagement, which is characterized by vigor, dedication, and absorption (Schaufeli et al., 2002), is positively correlated with enhanced patient care and reduced turnover rates (Liu et al., 2025; Zhou et al., 2023). Furthermore, perceived organizational support, defined as the belief that an organization values and supports its employees, predicts job satisfaction and commitment (Eisenberger et al., 2020; Gorji et al., 2014). These elements are particularly critical in the global nursing shortage and the rising turnover rates among younger nurses (Nagai et al., 2023).

Theories generally propose that perceived organizational support (POS) determines work engagement (WE) (Saks, 2006). However, emerging perspectives suggest that WE may also influence POS. According to Fredrickson (2001), the broaden-and-build theory suggests that positive emotions from engagement help employees view their work environment positively. The Job Demands-Resources (JD-R) model suggests that engaged employees with more personal resources evaluate organizational resources positively (Bakker & Demerouti, 2017). Work engagement may predict perceived organizational support over time (Biggs et al., 2014; Paine et al., 2021; Simbula et al., 2011). Notwithstanding these considerations, there exists a notable scarcity of research investigating the reverse pathway (WE → POS), particularly within the context of healthcare in developing nations. This study proposes a sequential mediation model in which QNWL enhances WH through WE and POS. We examine the traditional and reversed pathways to ascertain which of the two more effectively elucidates workplace happiness among Thai nurses. Through this investigation, we endeavor to enhance theoretical understanding and propose practical strategies to bolster the nursing workforce within resource-constrained healthcare systems.

Literature Review, Hypothesis, and Conceptual Framework

Koh Samui Hospital

A case study was conducted at Koh Samui Hospital, a world-class tourist destination. Then, in 2022-2024, 4, 6, and 17 nurses resigned, which may indicate a concern about staff satisfaction and well-being (Makowicz et al., 2022). Due to a high patient volume, hospital staff work under pressure, dealing with various kinds of medical cases, which can result in physical and emotional fatigue and dissatisfaction (Shanafelt et al., 2011). Interventions must address workload, welfare, work-life balance, and professional development opportunities (Keyko et al., 2016). Management must proactively support its staff's welfare through welfare policies, programs, and work cultures that support professional and personal development (Boamah et al., 2018). This will facilitate retaining staff while improving patient care quality (Perlo et al., 2017).

Quality of Nursing Work Life (QNWL)

QNWL defines work outcomes, such as happiness at work (Al Mutair et al., 2022). It involves multiple aspects, such as work-life balance, job security, and growth prospects (Sibuea et al., 2024). QNWL has been associated with workers' satisfaction, engagement, and retention in

healthcare settings (Nowrouzi et al., 2015; van Laar et al., 2007). In this context, the relationship between QNWL WH, WE, and POS is determined to correlate with each other. This will help propose work happiness and quality patient care strategies at Koh Samui Hospital.

QNWL serves as a vital multi-dimensional construct that encompasses satisfaction, engagement, motivation, and work-life balance regarding nurses' work experiences (Sajjad & Abbasi, 2014; Swamy et al., 2015); hence, it makes an important contribution when studying factors that affect work happiness. QNWL comprises aspects such as the work setting that affect both physical and mental health (Mosadeghrad, 2013; Rethinam & Ismail, 2008), enough compensation and non-monetary benefits (Nowrouzi et al., 2015), opportunities for career growth, followed by training, counseling, and learning opportunities that enhance organizational commitment (Mosadeghrad, 2013) and participation in decision-making that enhances value (Swamy et al., 2015). In healthcare organizations, QNWL is positively related to increased satisfaction and organizational commitment, with decreased turnover intention (Brooks & Anderson, 2005). Koca et al. (2024) have also shown a negative coefficient between workload and QNWL, suggesting that balancing enhances the quality of work and life.

Work Engagement (WE)

Work engagement is a positive cognitive, affective state of vigor, dedication, and absorption (Schaufeli et al., 2002). It is exhibited through high energy, mental toughness, a sense of worth, and focus on work. Relevant WE determinants in healthcare settings are support from supervisors and colleagues (Othman & Nasurdin, 2013), autonomy learning opportunities, personal resources, and leadership (Keyko et al., 2016). WE influence work performance, quality of patient care, and safety (Sheng et al., 2023). It found a positive relationship between work contentment and well-being (Kanste, 2011)

Work engagement in nursing is especially significant, with the professional commitment directly attributed to work settings and professional values (Al-Dossary, 2022). Research in specialized professional sectors, like nursing, shows that work-life quality may affect engagement more than organizational features (Keyko et al., 2016). QNWL, such as environment, compensation, and work-life balance, has impacted WE positively (Carvalho et al., 2023; Sahni, 2019). Organizations can enlarge us by amplifying QNWL to develop an environment that enhances the engagement of the medical staff. So, the first hypothesis is as follows:

H1: QNWL has a positive and significant impact on WE in nurses of Koh Samui Hospital.

Perceived Organizational Support (POS)

POS is the employee's belief that the organization cares about and values their well-being (Eisenberger et al., 2020). This theory is based on social exchange theory, in which employees and organizations form reciprocal relationships (Blau, 2017). In addition, meta-analyses demonstrated that POS positively correlates with significant outcomes, including job satisfaction, organizational commitment, and work performance (Hashish, 2017). In contrast, in-house POS is associated with stress, burnout, and intention to leave (Riggle et al., 2009). In the same vein, the quality of care nurses deliver to patients and their incidence of burnout is lower when they are supported in healthcare (Hashish, 2017; Aiken et al., 2012). This is vital because the above segments, high pressure, and low occupational fulfillment (Aamir et al., 2016), bring about high turnover (Lu et al., 2019). Furthermore, QNWL is a significant predictor of POS (Banan, 2017; Malki et al., 2020). Organizations providing such an environment of high-quality work will probably be perceived as supportive of employees. However, work engagement could partially mediate the association between these two constructs. Consequently, the (third) hypothesis is:

H2: QNWL positively and significantly affects POS among nurses at Koh Samui Hospital

Nurse Engagement as an Antecedent to Perceived Organizational Support

Traditionally, POS is viewed as a precursor to WE; however, recent research, particularly in nursing environments, suggests an inverted causal relationship. Nurses who show higher engagement levels tend to have a better understanding of organizational resources, which in turn enhances their perception of support (Bakker & Demerouti, 2008). According to Kahn's engagement theory (Kahn, 1990), the nurses who invest in their roles generate positive domino effects. These nurses engage in job crafting behaviors that enhance perceptions of organizational support over time (Bakker & Demerouti, 2017). Empirical evidence reveals that engaged nurses demonstrate a heightened sensitivity to organizational support systems (Bakker & Demerouti, 2008) actively transforming their environments through job crafting behaviors (Bakker & Demerouti, 2017) and creating positive resource spirals consistent with the Job Demands-Resources model (Taris & Schaufeli, 2016). Our findings highlight engaged nurses' proactive communication, which even increases visibility with management, leading to supportive interactions that are particularly important for POS (Eisenberger & Stinglhamber, 2011). This implies that WE are a driver of POS (Biggs et al., 2014; Paine et al., 2021; Simbula et al., 2011) in healthcare. Hence, the organization must see engagement as a strategic catalyst to induce positive dynamics. Therefore, we propose the second hypothesis:

H3: WE has a positive and significant impact on POS among nurses at Koh Samui Hospital

Work Happiness (WH)

Work happiness is an important issue in health systems because it naturally impacts the quality of patient care and enhances organizational outcomes (Boehm & Lyubomirsky, 2008). Happy nurses have positive emotions, feel satisfied with their work, and are engaged and committed, resulting in more meaningful work in treating patients (Lu et al., 2019). When hospitals operate in high-pressure environments, happier nurses deliver better-quality care with more accurate diagnoses (Salanova et al., 2005) and improved care interaction capabilities (Leiter et al., 1998). Working helps nurses feel fulfilled in their roles and contributes to the organization's well-being, thus reducing turnover rates among satisfied nurses (Raza et al., 2018). Work engagement correlates with higher happiness, life satisfaction, and lower turnover among nurses (Ghazawy et al., 2021; Ilmalwa & Hlatywayo, 2022). Other studies confirm this positive connection (Yalabik et al., 2017). Happier employees are generally more satisfied with their jobs when engaged. This study aims to verify this relationship among nurses at Koh Samui Hospital. Thus, the fifth hypothesis is:

H4: WE positively and significantly affect WH among nurses at Koh Samui Hospital.

Other studies proved that supportive environments, good relations with co-workers, good leadership, work-life balance, and job security are core promoting factors of work happiness, crucial to patient care quality and overall organizational performance (Sirgy et al., 2001). Studies demonstrate that POS is needed to predict WH and well-being in diverse work scenarios (Saber et al., 2024; Radwan et al., 2018; Schaufeli et al., 2002). This study investigates the relationship in healthcare, focusing on nurses at Koh Samui Hospital. Thus, the 4th hypothesis states:

H5: The POS positively and significantly affects WH on nurses in Koh Samui Hospital.

QNWL is essential in determining WH and well-being. Improvements in QNWL are associated with higher job satisfaction, better performance, and greater retention of nursing personnel (Al Mutair et al., 2022; Salahat & Al-Hamdan, 2022). In addition, QNWL is positively related to job satisfaction and negatively related to intentions to quit (Salahat & Al-Hamdan, 2022). We aim to explore this relationship among the nurses at Koh Samui Hospital; hence, formulating the sixth hypothesis.

H6: QNWL positively and significantly affects WH among nurses at Koh Samui Hospital

The Mediating Role of WE and POS

Drawing from the broaden-and-build theory (Fredrickson, 2001), the Job Demands-Resources (JD-R) model (Bakker & Demerouti, 2017), and social exchange theory (Blau, 2017), we present a mediation model linking QNWL to WH via WE and POS. Work environments emphasizing quality and positive emotions enhance psychological resources like resiliency and optimism, increasing employee engagement (Fredrickson, 2001). The JD-R model states that enriched jobs with adequate resources positively affect employees' vigor, dedication, and absorption (Bakker & Demerouti, 2017). QNWL supports WE by meeting essential psychological needs (Ni et al., 2023; Orgambídez & Almeida, 2020). Factors like quality of working life, violence exposure, supervisor support, fair pay, and career growth opportunities correlate with increased work engagement among nurses (Al Mutair et al., 2022; Rahim et al., 2023). Nurses who commit emotionally are proactive and resourceful (Shantz et al., 2016). They establish a cycle where engaged employees improve organizational resources, leading to greater perceived support (Almeida et al., 2024). Anticipated to impact WH positively, POS cultivates trust and satisfaction within supportive organizations, ultimately boosting nurse satisfaction (Blau, 2017). Research links POS to emotional well-being, job satisfaction, and lower turnover in healthcare (Caputo et al., 2023). Much current research focuses on isolated elements of the QNWL, WE, POS, and WH, especially in resource-constrained hospitals (Ayed et al., 2024; Chen et al., 2025; Ni et al., 2023). Engaged nurses excel at using resources and fostering supportive environments, boosting their well-being (Kohnen et al., 2024; Mudallal et al., 2017). This study investigates the mediation model among nurses at Koh Samui Hospital facing heavy workloads and stress. Improving QNWL under these conditions is vital for boosting work engagement, perceived organizational support, and job satisfaction. Thus, we propose the hypothesis:

H7: The quality of nursing work life affects work happiness for nurses at Koh Samui Hospital, mediated by work engagement and perceived organizational support.

Research Conceptual Framework

Accordingly, the paper extends the literature by developing a conceptual framework based on the social exchange theory (Nazir et al., 2018) and the job resources model (Mazzetti et al., 2023) to investigate the relationship between QNWL, WE, POS, and WH of nurses at Koh Samui Hospital. Based on the proposed model, QNWL was the independent variable, WH was the dependent variable, and we treated WE and POS as serial mediators. It shows the effect of QNWL on WH and WH on WH through the serial mediation of WE and POS.

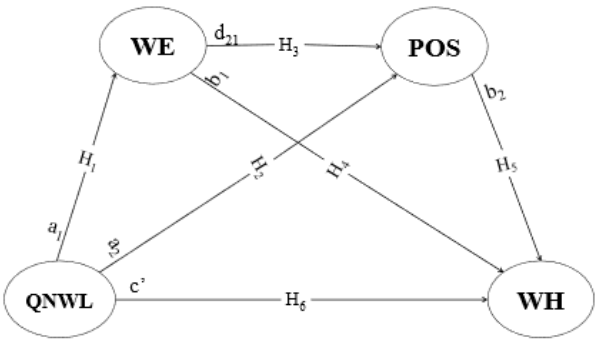

Figure 1 Conceptual framework

Note: The hypotheses H1-H7 align with the primary model (WE → POS) depicted in this conceptual framework. The alternative causal model (POS → WE) is included only in the results section for comparison.

The seven hypotheses establish the relationship paths: the influence of QNWL on WE (H1), the influence of WE on POS (H2), the influence of QNWL on POS (H3), the influence of POS

on WH (H4), the influence of WE on WH (H5), the direct influence of QNWL on WH (H6), and the indirect influence of QNWL on WH through WE and POS in a serial manner (H7).

Research Methodology

Sample and Data Collection

The population of this study was 157 nurses at Koh Samui Hospital, using convenience sampling as the sample access limit and the work shift pattern. While the stratified random sampling method was not used because the stratified population parameters could not be achieved, the data was collected from nurses from different departments to cover diverse perspectives. Sample size estimation was performed using an online calculator based on the SEM criteria proposed by Soper (2022) with these values: medium effect size ($f^2 = 0.15$), statistical power of 0.8, significance level of 0.05, 4 latent variables, and 20 questions, resulting in a minimum sample size of 100 subjects. An online link was shared to a Google Docs questionnaire, which included topics such as quality of work life, perceived organizational support, work engagement, work happiness, and demographic data. A sample of 100 nurses, or 63.7% of the nursing population, represents major hospital departments: medicine (25%), surgery (20%), emergency (15%), outpatient (15%), critical care (15%), and others (10%), aligning with the overall distribution. After calculating the model, the power statistic will be tested using WarpPLS 8 with Inverse Square Root and Gamma-Exponential methods (Kock & Hadaya, 2018).

Research Measures

The research used measures developed from international standard tools and adapted to the context.

Quality of Nursing Work Life: A 5-item scale adapted from Brooks & Anderson (2005) QNWL covers four dimensions: work life/home life, work design, work context, and work world.

Perceived Organizational Support: A 5-item scale modified from Eisenberger et al. (2025) Assessing the perceived level at which the organization values and cares for employees.

Work Engagement: A 5-item scale adapted from Schaufeli et al. (2002) Measuring three dimensions: vigor, dedication, and absorption.

Work Happiness: A 5-item scale adapted from Hills & Argyle (2002) Measure, covering three dimensions: positive emotions, job satisfaction, and meaning in work.

Measurements followed recognized standards, selecting the top five items with the highest loadings. Experts translated and validated instruments with three nursing specialists before testing with 30 nurses. All instruments had reliability (Cronbach's Alpha) between 0.908 and 0.960.

Data Analysis

The collected data was analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with ADANCO software (Henseler, 2017). The models to be examined include the assessment of measurement models and structural models, but all models must evaluate the overall model quality. Each model possesses the following quality: Overall Model Fit includes SRMR (Standardized Root Mean Square Residual) with a criterion of less than or equal to 0.08, d_G (Geodesic Distance) using the Bootstrap method, and d_{ULS} (Unweighted Least Squares Discrepancy) with an SRMR criterion of less than 0.08.

The indicator reliability must be verified regarding the measurement model so that factor loadings exceed 0.708. Internal Consistency necessitates that Rho A and Rho C Alpha values surpass 0.7. Convergent Validity requires that the Average Variance Extracted (AVE) is more significant than 0.5, while Discriminant Validity must not exceed 0.85. In the structural model, t-statistics must exceed 1.96, and P-values should be under 0.05. R^2 values of 0.25, 0.50, and 0.75 indicate low, medium, and high levels, respectively, while f^2 values of 0.02, 0.15, and 0.35 denote low, medium, and high levels.

Research Ethics

The Public Health Research Ethics Committee of Surat Thani Province approved this research. Data collection was conducted under the principle of voluntariness, with informed consent obtained and strict confidentiality maintained by research participants.

Research Results

Demographic Analysis

The study's sample consists of 100 nursing personnel, with the majority being female (97%) and aged between 23 and 59. Among the sample, 70% are under 40 years old. Regarding marital status, most participants are single (61 individuals) or married (30 individuals). The sample's work experience spans 1 to 39 years, with 70% under 18 years. About 100% hold nursing positions.

Model Fit

Both the POS-WE and WE-POS models have identical fit indices. The SRMR of 0.0623 is below the 0.08 threshold, indicating a good fit. The dULS (0.8153) and dG (1.4111) values are equal, showing that both models effectively fit the data and illustrate the relationship between Perceived Organizational Support and Work Engagement similarly.

Table 1 Model fit of the POS-WE and WE-POS model

	POS-WE model			WE-POS model		
	Value	**HI95**	**HI99**	**Value**	**HI95**	**HI99**
SRMR	0.0623	0.0425	0.0477	0.0623	0.0425	0.0477
d_{ULS}	0.8153	0.3789	0.4774	0.8153	0.3789	0.4774
d_G	1.4111	0.8834	1.1860	1.4111	0.8834	1.1860

Table 2 Results of the measurement model

Items	**Questionnaire**	**Loading**		**Rho_C**		**Cronbach's alpha(α)**		**AVE**	
		POS-WE	**WE-POS**	**POS-WE**	**WE-POS**	**POS-WE**	**WE-POS**	**POS-WE**	**WE-POS**
QNWL	0.9080			0.9111	0.9111	0.9099	0.9099	0.6727	0.6727
QNWL1	I can properly balance work and personal life.	0.8016	0.8016						
QNWL2	The hospital has sufficient essential medical equipment.	0.7440	0.7440						
QNWL3	I have the freedom to make clinical decisions within professional boundaries.	0.8731	0.8731						

Items	Questionnaire	Loading		Rho_C		Cronbach's alpha(α)		AVE	
		POS-WE	WE-POS	POS-WE	WE-POS	POS-WE	WE-POS	POS-WE	WE-POS
QNWL4	I feel secure in my job position.	0.8640	0.8640						
QNWL5	The hospital has clear career advancement paths.	0.8116	0.8116						
POS	(0.9600)			0.9263	0.9562	0.9239	0.9239	0.7170	0.7170
POS1	The hospital values my work.	0.8783	0.8783						
POS2	The hospital supports my career development.	0.6966*	0.6966*						
POS3	I receive organizational help when facing work problems.	0.9044	0.9044						
POS4	The hospital cares about my well-being.	0.8966	0.8966						
POS5	The hospital listens to my opinions and suggestions.	0.8406	0.8406						
WE	(0.9560)			0.9558	0.9558	0.9562	0.9562	0.8125	0.8125
JE1	I feel enthusiastic when coming to work.	0.9025	0.9025						
JE2	I dedicate myself fully to my work.	0.8564	0.8564						
JE3	Time passes quickly while working.	0.9530	0.9530						
JE4	I concentrate intensely on my work.	0.9038	0.9038						
JE5	I always think of ways to improve my work.	0.8885	0.8885						
WH	(0.9240)			0.9605	0.9605	0.9608	0.9608	0.8297	0.8297
WH1	My work has value and meaning.	0.9360	0.9360						
WH2	I feel good when patients improve under my care.	0.9447	0.9447						
WH3	I am happy working even on busy days.	0.9305	0.9305						
WH4	I enjoy my daily work.	0.8853	0.8853						
WH5	I am happy with my department's work atmosphere.	0.8546	0.8546						

*This study retained the POS2 variable with a loading of 0.6-0.708, following Hair et al. (2013) criteria for significance rather than the stricter 0.708 threshold. This retention did not significantly impact the study results.

Measurement Model

WE-POS and POS-WE models show identical indicators, indicating robust validity across constructs. The measurement model analysis reveals strong psychometric properties across the constructs (QNWL, POS, WE, WH). Most indicator loadings exceed 0.8, which confirms the reliability of the items. Reliability measures, including Rho_C and Cronbach's alpha, range from 0.91 to 0.96, indicating a high level of internal consistency. All constructs show AVE values over 0.67, indicating convergent validity. HTMT analysis reveals all construct relationships below 0.85, confirming discriminant validity. The strongest relationship is between POS and WE (0.8225), while the weakest is QNWL and WE (0.6374). This assessment confirms the instrument's quality for nursing work environment research.

Table 3 HTMT2 of both models

Construct	QNWL	WH	POS	WE
QNWL				
WH	0.8084			
POS	0.7978	0.7870		
WE	0.6374	0.6633	0.8225	

Structural Model Analysis

This analysis investigates the relationships between the quality of nursing work life (QNWL), work engagement (WE), perceived organizational support (POS), and work happiness (WH) using two models: WE-POS (primary) and POS-WE (alternative).

WE-POS Model (Main Model)

In the WE-POS model, QNWL positive significance impacts WE ($\beta = 0.6386$, $p < 0.0001$), which affects POS ($\beta = 0.4926$, $p < 0.0001$), and POS impacts WH ($\beta = 0.3761$, $p = 0.0466$). The relationship from QNWL to WH is significant ($\beta = 0.4508$, $p = 0.0012$), indicating partial serial mediation.

POS-WE Model (Alternative Model)

In the POS-WE model, QNWL strongly impacts POS ($\beta = 0.8123$, $p < 0.0001$) and drives WE ($\beta = 0.8575$, $p < 0.0001$). However, the effect of WE on WH is insignificant ($\beta = 0.0761$, $p = 0.5438$), disrupting the mediation chain and reducing model power.

Serial Mediation Comparison

Models mainly vary according to their mediating pathways.

WE-POS model (Supported): The functional mediation chain QNWL → WE → POS → WH is consistent, with all four statistically significant links. This indicates partial mediation through a direct path (QNWL → WH).

POS-WE Model (Not Supported): This model disrupts the analogy since the WE → WH link is insignificant ($p = 0.5438$), severing the QNWL → POS → WE → WH chain.

Hypothesis Testing Outcomes

Hypothesis testing confirms the WE-POS model as a superior mediator. Five of the six relationships are accepted (H1, H2, H3, H5, H6), while H4 (WE → WH) is rejected. Additionally, the POS-WE model dismisses H5, disrupting the mediation chain. These findings support the WE-POS model for understanding the impact of QNWL on WH. QNWL enhances WE, leading to improved POS and contributing to WH. This partial mediation indicates that QNWL also directly affects WH, highlighting how nursing work life influences work happiness.

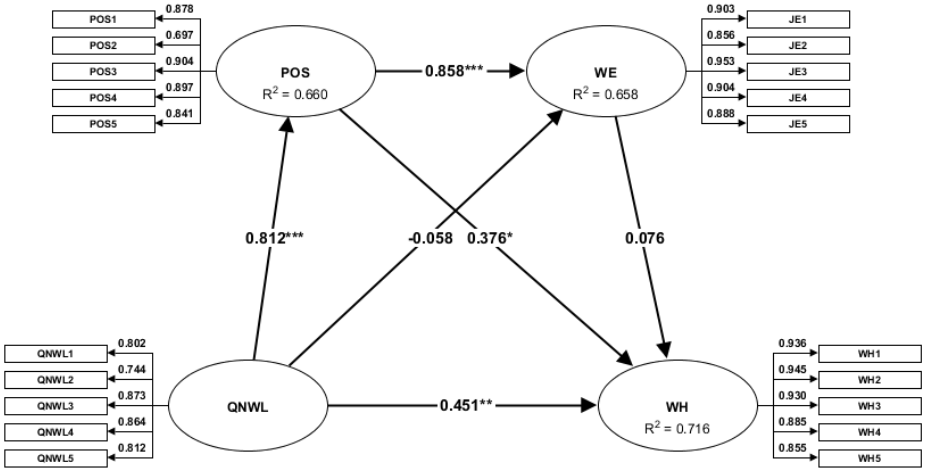

Figure 2 Result of the POS-WE model

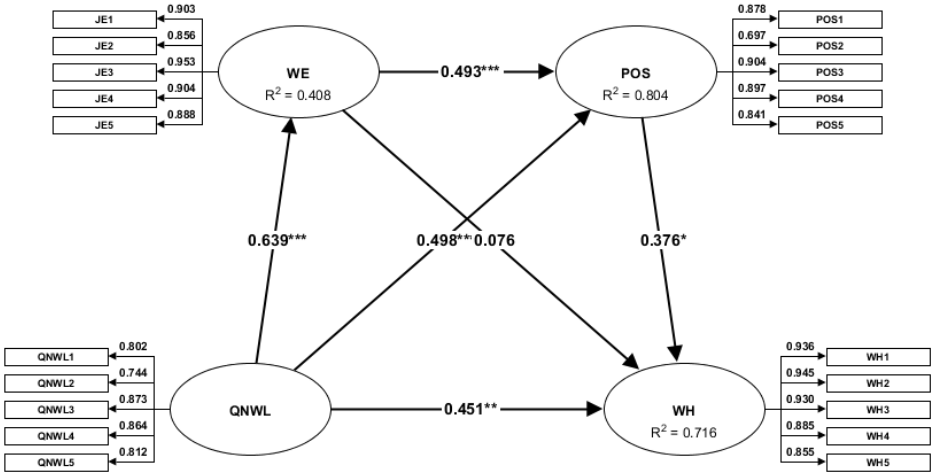

Figure 3 Result of the WE-POS model

Table 4 Results of the structural model and hypothesis testing

Direct Effect	Original coefficient	Standard bootstrap results			Percentile bootstrap quantiles		Hypothesis
		Standard error	t-value	p-value (2-sided)	2.5%	97.5%	
POS-WE Model							
H1: QNWL -> POS	0.8123	0.0518	15.6772	0.0000	0.7013	0.9034	Support
H2: QNWL -> WE	-0.0579	0.1374	-0.4215	0.6734	-0.3207	0.2162	Not Support
H3: POS -> WE	0.8575	0.1481	5.7917	0.0000	0.5546	1.1340	Support
H4: POS -> WH	0.3761	0.1889	1.9907	0.0466	-0.0402	0.6981	Support
H5: WE -> WH	0.0761	0.1253	0.6071	0.5438	-0.1311	0.3579	Not Support
H6: QNWL -> WH	0.4508	0.1391	3.2405	0.0012	0.2061	0.7489	Support
WE-POS Model							
H1: QNWL -> WE	0.6386	0.0754	8.4734	0.0000	0.4834	0.7799	Support
H2: QNWL -> POS	0.4977	0.0979	5.0814	0.0000	0.3129	0.6989	Support
H3: WE -> POS	0.4926	0.1081	4.5568	0.0000	0.2687	0.6890	Support
H4: WE -> WH	0.0761	0.1253	0.6071	0.5438	-0.1311	0.3579	Not Support
H5: POS -> WH	0.3761	0.1889	1.9907	0.0466	-0.0402	0.6981	Support
H6: QNWL -> WH	0.4508	0.1391	3.2405	0.0012	0.2061	0.7489	Support

Table 5 Post-hoc power analysis

Minimum absolute significance path coefficient	Significance Level	Power level	Inverse square root method	Gamma-exponential method
0.376	0.050	0.800	44	31
0.376	0.050	0.982	100	79

Post-Hoc Power Analysis

This study used Soper (2022) a priori sample size calculator, considering indicators, latent variables, significance level, effect size, and statistical power. However, the final sample size (N = 100) may require closer examination. A post-hoc power analysis was performed after estimating the model. As shown in Table 1, the smallest significant path coefficient was between POS and WH (β = 0.376). With a power threshold of 0.80, the Inverse Square Root Method estimated a minimum of 44 participants, while the Gamma-Exponential Method suggested 31. With 100 participants, the power using the Inverse Square Root Method was 0.982. All calculations were completed with the three-month trial of WarpPLS 8, following the procedures detailed by Jhantasana (2023).

Conclusion and Discussion

Discussion

The analysis of the WE-POS and POS-WE models highlights the connections between nursing QNWL, WE, POS, and WH among nurses at Koh Samui Hospital. These findings validate the WE-POS model and question traditional perspectives on work engagement and support in nursing. The WE-POS model explained 82.0% of the variance in work happiness ($R^2 = 0.820$), demonstrating strong explanatory power.

In this model, QNWL had a notable impact on WE (β = 0.6386, $p < 0.0001$, t = 8.47), contrasting with the POS-WE model, which identified no direct connection between QNWL and WE (β = -0.0579, p = 0.6734). This result highlights the significance of a quality work life in promoting engagement among nurses, consistent with professional settings where engagement arises directly from work conditions and professional values rather than organizational influences (Keyko et al., 2016).

The pathway from WE to POS (β = 0.4926, $p < 0.0001$, t = 4.56) implies that engagement precedes the recognition of organizational support in nursing. Engaged nurses better appreciate support structures, especially in healthcare, where commitment to patient care shapes perceptions of that support.

The relationship between POS and QNWL is consistent with (Almarshad et al., 2019), "Confirming Quality Work Life as Enhancing Perceived Support in Organizations." Also, POS has shaped WH (β = 0.3761, p = 0.0466, t = 1.99), consistent with social exchange theory (Blau, 2017), implying that organizational support is essential to employee enjoyment.

The partial mediation relationship between QNWL and WH represents the different pathways where quality work life affects our happiness. QNWL also directly influenced WH (β = 0.4508, p = 0.0012, t = 3.24).

The relationship between work engagement (WE) and work happiness (WH) was not significant (β = 0.0761, p = 0.5438) in both models, despite prior research suggesting WE impacts WH. However, unique factors at Koh Samui Hospital, like high workloads, may obscure this link. This finding highlights a unique situation at this hospital. Additionally, while WE does not directly impact WH, it substantially affects perceived organizational support (POS), which influences WH. This is consistent with the broaden-and-build theory (Fredrickson, 2001) and the Job Demands-Resources (JD-R) model (Bakker & Demerouti, 2017), indicating that engaged employees cultivate positive perceptions of their surroundings, thereby improving psychological well-being. In high-demand environments like Koh Samui Hospital, engagement may foster feelings of support rather than happiness due to stressors such as workload and staff shortages.

The partial serial mediation effect demonstrated in the WE-POS model is consistent with research by Biswas & Bhatnagar (2013), highlighting the complex interplay between variables. The significant pathways QNWL → WE → POS → WH, alongside the direct QNWL → WH

relationship, suggest that nurses' happiness stems from both direct and indirect influences of quality work life.

Limitations

This study has four key limitations: 1) The cross-sectional design restricts establishing causal relationships and tracking changes over time; future research should utilize longitudinal designs to better understand variable dynamics (Ross & Zaidi, 2019). 2) A sample size of at least 100 may diminish accuracy, but a larger sample would increase confidence in findings and reveal nuanced relationships (Apidechkul et al., 2022). 3) Due to distinctive challenges, Koh Samui Hospital's status as a tourist destination may limit generalizability to other healthcare settings (Chebli & Said, 2020). 4) Data collection via questionnaires might miss qualitative insights; future research could employ mixed-methods approaches (Chen & Chen, 2010).

Recommendations

Three key recommendations for hospital management: Create supportive environments with resources for work-life integration, flexible scheduling, and professional development (Dutra & Guirardello, 2021; Omar et al., 2021). Implement evidence-based interventions like consistent schedules, support groups, and sanctuary spaces to alleviate job demands (Williams et al., 2022). Establish mentorship (Moss et al., 2016) and open communication channels (Almeida et al., 2024), and address nurses' needs quickly. When nurses feel supported, they are more positive and provide better quality of care (Chenoweth et al., 2014). Work engagement involves meaningful involvement in decision-making, professional development needs, and work teams (Jones, 2005). Engaged staff build perceived organizational support, and nurse satisfaction forms better patient relationships (Barello et al., 2012) and increases nurse retention (Alharbi et al., 2022).

Future Research

Future research can help mitigate current limitations and broaden understanding by examining other variables. We encourage research on other related factors (e.g., leadership styles, organizational culture, work stress (Wallace et al., 2009) outside of individual nurse happiness determinants for a more holistic understanding of the factors that lead to happy nurses. Mixed methods, Nested data through quantitative and qualitative approaches, provide a deeper understanding of context and relationships between variables (Hu & Bentler, 1999). Compared to other relationships, comparative studies of hospitals in different tourist destinations reveal more about specific factors (Tao et al., 2015). In particular, future studies should employ longitudinal designs to confirm causal relationships and observe the evolution of QNWL, WE, POS, and WH over time (Biggs et al., 2014; Paine et al., 2021)**.** Adopting longitudinal designs involves monitoring variable changes over time to establish more plausible causal links and better understand how relationships evolve across career milestones (Dall'Ora et al., 2022). Implementing interventions means that interventions aimed at addressing the identified pathways would focus on nurse satisfaction and practical, evidence-based strategies for system implementation.

Conclusion

This research examined how work engagement (WE) and perceived organizational support (POS) mediate the relationship between nursing work-life quality (QNWL) and work happiness (WH) at Koh Samui Hospital. PLS-SEM showed that the WE-POS model offers greater explanatory power than the traditional POS-WE model, challenging assumptions about the relationship between engagement and support in nursing. It was found that QNWL directly impacts WE, influencing POS and contributing to WH. Furthermore, QNWL directly relates to WH, indicating partial serial mediation.

This study contributes to the sustainable organization literature by demonstrating how investment in work-life quality creates a self-reinforcing cycle of engagement and support that

sustains long-term employee happiness. The findings indicate that when healthcare organizations foster high-quality work environments, they cultivate resilient human capital resources capable of enduring the pressures associated with high-demand environments, such as tourist hospitals. The sustainability aspect is apparent in how enhancements in work engagement contribute to an increased perception of organizational support, thereby fostering an organizational culture that consistently promotes employee well-being rather than depleting it. This study advances the theoretical framework and practical applications of sustainable human resource management by demonstrating how the quality of work life affects nurse satisfaction through persistent processes. It offers guidelines for hospital managers to enhance nurse satisfaction through targeted actions that cultivate a positive work environment. Improving work-life quality, engagement, and support helps healthcare organizations create sustainable strategies for nurse well-being, which can enhance patient outcomes and reduce turnover while establishing organizational resilience. This model explains 82% of WH variance, underscoring its significance for developing sustainable nurse satisfaction systems in high-demand settings like tourist hospitals, where maintaining workforce stability is crucial for long-term organizational performance.

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