



DETERMINANT FACTORS INFLUENCING NURSING RESILIENCE ON NURSING WORK EFFICIENCY AT KING FAHAD SPECIALIST HOSPITAL – QASSIM CLUSTER 2026

FAKTOR-FAKTOR PENENTU YANG MEMPENGARUHI KETAHANAN KEPERAWATAN TERHADAP EFISIENSI KERJA KEPERAWATAN DI RUMAH SAKIT SPESIALIS KING FAHAD – KLASER QASSIM 2026

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Abstract

The complexity of modern healthcare services has led nursing personnel to face high workloads, intensive emotional demands, and dynamic, high-risk working environments. These conditions make nursing resilience an essential psychological factor in maintaining the effectiveness and efficiency of nursing performance. This study aimed to analyze the determinant factors influencing nursing resilience and its impact on nursing work efficiency at King Fahad Specialist Hospital in 2026. This study employed a quantitative cross-sectional design using the Structural Equation Modeling–Partial Least Squares (SEM-PLS) approach. The study population consisted of all active nurses at the Qassim Health Cluster, totaling 4,425 nurses. A total of 356 respondents were selected using stratified random sampling. Data were collected using the Nursing Resilience Scale, Nursing Work Efficiency Scale, Utrecht Work Engagement Scale, and Perceived Organizational Support Scale, all of which had been tested for validity and reliability. Data analysis was conducted using SmartPLS 4. The results showed that organizational support ($\beta = 0.431$; $p < 0.001$), work engagement ($\beta = 0.388$; $p < 0.001$), psychological well-being ($\beta = 0.362$; $p < 0.001$), and a supportive work environment ($\beta = 0.295$; $p < 0.001$) had significant positive effects on nursing resilience. Conversely, high workload negatively affected nursing resilience ($\beta = -0.276$; $p < 0.001$). Nursing resilience was also found to have a significant positive effect on nursing work efficiency ($\beta = 0.614$; $p < 0.001$). The R-square value of 0.71 indicated that the research model explained 71% of the variance in nursing work efficiency. Nursing resilience is a strategic psychological resource influenced by organizational, psychological, and work environment factors in improving nursing work efficiency. This study is expected to provide theoretical contributions to the development of nursing management and healthcare organizational behavior literature, as well as practical contributions for hospitals in designing strategies to strengthen healthcare workers' psychological resilience based on human-centered healthcare management.

Keywords : Nursing Resilience, Nursing Work Efficiency, Work Engagement, Organizational Support, Psychological Well-Being, SEM-PLS.

Abstrak

Kompleksitas layanan kesehatan modern telah menyebabkan tenaga keperawatan menghadapi beban kerja yang tinggi, tuntutan emosional yang intensif, dan lingkungan kerja yang dinamis dan berisiko



tinggi. Kondisi ini menjadikan ketahanan keperawatan sebagai faktor psikologis penting dalam menjaga efektivitas dan efisiensi kinerja keperawatan. Studi ini bertujuan untuk menganalisis faktor-faktor penentu yang memengaruhi ketahanan keperawatan dan dampaknya terhadap efisiensi kerja keperawatan di Rumah Sakit Spesialis King Fahad pada tahun 2026. Studi ini menggunakan desain kuantitatif cross-sectional dengan pendekatan Structural Equation Modeling–Partial Least Squares (SEM-PLS). Populasi penelitian terdiri dari seluruh perawat aktif di Klaster Kesehatan Qassim, berjumlah 4.425 perawat. Sebanyak 356 responden dipilih menggunakan stratified random sampling. Data dikumpulkan menggunakan Skala Ketahanan Keperawatan, Skala Efisiensi Kerja Keperawatan, Skala Keterlibatan Kerja Utrecht, dan Skala Dukungan Organisasi yang Dirasakan, yang semuanya telah diuji validitas dan reliabilitasnya. Analisis data dilakukan menggunakan SmartPLS 4. Hasil penelitian menunjukkan bahwa dukungan organisasi ($\beta = 0,431$; $p < 0,001$), keterlibatan kerja ($\beta = 0,388$; $p < 0,001$), kesejahteraan psikologis ($\beta = 0,362$; $p < 0,001$), dan lingkungan kerja yang mendukung ($\beta = 0,295$; $p < 0,001$) memiliki pengaruh positif yang signifikan terhadap ketahanan keperawatan. Sebaliknya, beban kerja yang tinggi berpengaruh negatif terhadap ketahanan keperawatan ($\beta = -0,276$; $p < 0,001$). Ketahanan keperawatan juga ditemukan memiliki pengaruh positif yang signifikan terhadap efisiensi kerja keperawatan ($\beta = 0,614$; $p < 0,001$). Nilai R-square sebesar 0,71 menunjukkan bahwa model penelitian menjelaskan 71% varians dalam efisiensi kerja keperawatan. Ketahanan keperawatan merupakan sumber daya psikologis strategis yang dipengaruhi oleh faktor organisasi, psikologis, dan lingkungan kerja dalam meningkatkan efisiensi kerja keperawatan. Studi ini diharapkan dapat memberikan kontribusi teoritis terhadap pengembangan literatur manajemen keperawatan dan perilaku organisasi layanan kesehatan, serta kontribusi praktis bagi rumah sakit dalam merancang strategi untuk memperkuat ketahanan psikologis tenaga kesehatan berdasarkan manajemen layanan kesehatan yang berpusat pada manusia.

Kata Kunci : Ketahanan Keperawatan, Efisiensi Kerja Keperawatan, Keterlibatan Kerja, Dukungan Organisasi, Kesejahteraan Psikologis, SEM-PLS.

1. INTRODUCTION

Modern healthcare systems heavily depend on the effectiveness and efficiency of nursing personnel as the primary component of patient-centered healthcare services. Nurses represent the largest group of healthcare professionals in hospitals and play a strategic role in maintaining patient safety, improving service quality, and supporting overall healthcare organizational effectiveness (World Health Organization [WHO], 2024). In modern healthcare practice, nurses are not only responsible for direct clinical care but are also involved in multidisciplinary team coordination, health education, patient management, and rapid clinical decision-making (Cummings et al., 2021).

Globally, the World Health Organization (2024) reported that increasing healthcare complexity, rising chronic disease prevalence, advancements in healthcare technology, and growing patient care demands have significantly increased healthcare workers' workloads. These conditions have contributed to higher psychological pressure and burnout risks among nurses worldwide. Studies by Dyrbye et al. (2020) and Shanafelt et al. (2022) revealed that more than 40% of healthcare professionals experience burnout due to excessive work demands, emotional pressure, and imbalance between job demands and job resources in modern healthcare environments.

Nurses face high workloads, limited resources, emotional strain, long working shifts, and the complexity of caring for critically ill patients. These conditions increase the risk of work stress, emotional exhaustion, burnout, and decreased productivity, ultimately affecting nursing work efficiency and patient care quality (West et al., 2020; Dall'Ora et al., 2020). Furthermore, Mahdi Ghasemi et al. (2023) demonstrated that burnout among healthcare professionals is significantly associated with reduced patient safety, service quality, and hospital organizational effectiveness.

Nursing resilience refers to an individual's ability to adapt, endure, and recover effectively from work-related stress, emotional challenges, and environmental changes (Hobfoll, 2011). In modern



hospital settings, nursing resilience functions as a crucial psychological resource that helps healthcare workers maintain psychological stability and optimal work performance under high-pressure conditions (Htay & Whitehead, 2021).

Previous studies have shown that nurses with higher resilience levels tend to have better coping abilities, lower burnout levels, higher work engagement, and better adaptability to organizational changes in healthcare settings (Lee et al., 2024). Nursing resilience also contributes to improved patient safety, healthcare quality, productivity, and hospital organizational effectiveness (Martinez et al., 2023). Ahmed et al. (2024) further explained that healthcare professionals with strong resilience are better able to maintain interpersonal communication quality, teamwork, and patient care effectiveness despite experiencing high work pressure.

In addition to resilience, previous studies have identified organizational support, work engagement, psychological well-being, and supportive work environments as important determinants of healthcare workers' psychological resilience. García-Sierra et al. (2022) found that organizational support significantly influences nurses' work engagement and psychological well-being. Similarly, Schaufeli et al. (2020) emphasized that work engagement contributes to increased intrinsic motivation, productivity, and healthcare workers' adaptability in dealing with organizational pressure.

Theoretically, the relationship between nursing resilience and work efficiency can be explained using the Job Demands–Resources Theory (JD-R Theory). This theory suggests that individuals with strong personal resources, such as resilience, are better able to cope with job demands, thereby enhancing work motivation and organizational performance (Bakker & Demerouti, 2020). In specialist hospital settings, high job demands, including emotional pressure, workload, and service complexity, can be balanced by psychological resources such as resilience, work engagement, and psychological well-being.

Furthermore, the Conservation of Resources Theory developed by Hobfoll (2011) explains that individuals strive to preserve psychological resources to reduce stress and maintain work effectiveness. In nursing contexts, resilience serves as a protective mechanism that helps healthcare workers maintain psychological stability, work energy, and service effectiveness amidst high organizational pressure.

However, studies examining determinant factors influencing nursing resilience and nursing work efficiency in specialist hospitals in the Middle East remain limited. Most previous studies focused primarily on burnout, job satisfaction, or work engagement, while research specifically investigating the structural relationship between organizational factors, psychological resources, and nursing work efficiency using the Structural Equation Modeling–Partial Least Squares (SEM-PLS) approach remains scarce (Kim et al., 2022; Zhang et al., 2023).

Additionally, most prior studies were conducted in Western and East Asian countries, limiting the generalizability of findings to the Saudi Arabian healthcare system. Specialist hospitals in Saudi Arabia possess unique characteristics, including high service complexity, multicultural healthcare workforces, and greater pressure from referral patient services compared to general hospitals (Al-Yami et al., 2025).

As one of the largest specialist hospitals in Saudi Arabia, King Fahad Specialist Hospital within the Qassim Health Cluster has a large nursing workforce, high service complexity, and dynamic work pressure. These conditions make the hospital highly relevant for examining determinant factors influencing nursing resilience and nursing work efficiency. Therefore, this study was conducted to analyze the determinant factors influencing nursing resilience and nursing work efficiency at King Fahad Specialist Hospital – Qassim Cluster in 2026 using the Structural Equation Modeling–Partial Least Squares (SEM-PLS) approach.

2. RESEARCH METHOD

Research Design

This study employed a quantitative approach with a cross-sectional explanatory study design. The quantitative approach was used to examine the structural relationships between the determinant



factors of nursing resilience and nursing work efficiency using the Structural Equation Modeling–Partial Least Squares (SEM-PLS) approach.

Research Setting and Period

The study was conducted at King Fahad Specialist Hospital, which is part of the Qassim Health Cluster, Saudi Arabia. The hospital is one of the largest referral specialist hospitals in Saudi Arabia, characterized by high service complexity and a large nursing workforce. Data collection was conducted from December 2025 to February 2026.

Population and Sample

The study population consisted of all active nurses working at King Fahad Specialist Hospital – Qassim Health Cluster, totaling 4,425 nurses from various units, including the Intensive Care Unit (ICU), Emergency Department, Medical Ward, Surgical Ward, Pediatric Unit, Cardiac Unit, Outpatient Department, and other Specialized Care Units. The sample size was determined based on the SEM-PLS recommendation by Hair et al. (2021), resulting in 312 respondents.

Sampling Technique

The sampling technique used was stratified random sampling based on nursing service units to increase respondent representation, reduce sampling bias, and ensure proportional representation from each hospital service unit.

Inclusion and Exclusion Criteria

Inclusion Criteria

1. Active nurses working at King Fahad Specialist Hospital.
2. Having at least six months of work experience.
3. Willing to participate as research respondents.
4. Providing informed consent.

Exclusion Criteria

1. Nurses on long-term leave.
2. Nurses undergoing further education or training.
3. Respondents who did not complete the questionnaire fully.
4. Respondents who withdrew during the research process.

Research Variables

Independent Variables

1. Organizational Support (X1)
2. Work Engagement (X2)
3. Psychological Well-Being (X3)
4. Work Environment (X4)
5. Workload (X5)

Mediating Variable

Nursing Resilience (Z)

Dependent Variable

Nursing Work Efficiency (Y)

Operational Definitions

Variable	Operational Definition	Indicators	Scale
Organizational Support	Nurses' perceptions of organizational support	Leadership support, rewards, work facilities, psychological support	Likert 1–5
Work Engagement	Nurses' psychological involvement in work	Vigor, dedication, absorption	Likert 1–5
Psychological Well-Being	Psychological well-being condition of nurses	Emotional control, psychological balance, job satisfaction	Likert 1–5
Work Environment	Physical and psychosocial work environment conditions	Leadership, communication, teamwork, work safety	Likert 1–5



Variable	Operational Definition	Indicators	Scale
Workload	Level of physical and psychological work demands	Work pressure, task quantity, work shifts	Likert 1–5
Nursing Resilience	Ability to adapt and cope with work pressure	Adaptation, coping, emotional stability, recovery	Likert 1–5
Nursing Work Efficiency	Ability to provide optimal and effective healthcare services	Productivity, service quality, work time effectiveness	Likert 1–5

Research Instruments

Data were collected using structured questionnaires consisting of:

1. Organizational Support Scale
2. Utrecht Work Engagement Scale (UWES)
3. Psychological Well-Being Scale
4. Nursing Work Environment Scale
5. Nursing Workload Scale
6. Nursing Resilience Scale
7. Nursing Work Efficiency Scale

Validity and Reliability Testing

Validity Testing

Validity testing was conducted using:

1. Convergent validity
2. Discriminant validity

Convergent Validity Criteria

- Loading factor > 0.70
- Average Variance Extracted (AVE) > 0.50

Discriminant Validity Criteria

- Fornell–Larcker Criterion
- Heterotrait–Monotrait Ratio (HTMT) < 0.90

Reliability Testing

Instrument reliability was tested using:

1. Composite Reliability (CR)
2. Cronbach's Alpha

Reliability Criteria

- Composite Reliability > 0.70
- Cronbach's Alpha > 0.70

Data Collection Technique

Data collection was conducted through:

1. Online questionnaire distribution using Google Forms.
2. Direct questionnaire distribution to respondents in hospital service units.

The stages of data collection included:

1. Research socialization.
2. Explanation of informed consent.
3. Questionnaire distribution.
4. Monitoring questionnaire completion.
5. Verification of data completeness.

Data Analysis Technique

Data analysis was conducted using Structural Equation Modeling–Partial Least Squares (SEM-PLS) with SmartPLS 4 software.

The SEM-PLS approach was selected because it:

1. Is capable of analyzing complex relationships among variables.



2. Can be applied to mediation models.
3. Does not require normal data distribution.
4. Is suitable for predictive theory-based model development.

Descriptive Analysis

Descriptive analysis was used to describe:

- Respondent characteristics,
- Data distribution,
- Mean and standard deviation values of the research variables.

Outer Model Analysis

Outer model evaluation was conducted to assess:

1. Convergent validity
2. Discriminant validity
3. Composite reliability
4. Cronbach's alpha

Inner Model Analysis

Inner model evaluation was conducted using:

1. R-square (R^2)
2. Effect size (f^2)
3. Predictive relevance (Q^2)
4. Goodness of Fit (GoF)

Hypothesis Testing

Hypothesis testing was conducted using the bootstrapping method with the following criteria:

- T-statistics > 1.96
- P-value < 0.05

The hypothesis was accepted if it met the statistical significance criteria.

Research Ethics

This study received ethical approval from the Research Ethics Committee of King Fahad Specialist Hospital.

The ethical principles applied in this study included:

1. Informed consent
2. Confidentiality
3. Anonymity
4. Voluntary participation
5. Beneficence
6. Non-maleficence

All respondents were provided with explanations regarding the study objectives and respondents' rights before completing the questionnaire.

3. RESULT AND DISCUSSION

Respondent Characteristics

This study involved 312 active nursing personnel working at King Fahad Specialist Hospital as research respondents. Respondent characteristics were analyzed to describe the demographic and professional profiles of nurses based on gender, age, educational level, work experience, and service unit.

Based on gender, the majority of respondents were female, totaling 214 individuals (68.6%), while male respondents accounted for 98 individuals (31.4%). These findings indicate that the nursing profession in specialist hospitals remains predominantly occupied by female healthcare personnel. In terms of age, most respondents were within the productive working-age range of 26–35 years, comprising 169 individuals (54.2%), followed by the 36–45 years age group with 91 individuals (29.2%). Respondents aged below 25 years totaled 32 individuals (10.3%), while those above 45 years



accounted for 20 individuals (6.4%). These results indicate that the majority of nursing personnel were in their active working phase with high service demands.

Regarding educational background, most respondents held a Bachelor of Nursing degree, totaling 228 individuals (73.1%), followed by diploma-level nursing education with 61 individuals (19.6%), and postgraduate education with 23 individuals (7.4%). Based on work experience, the majority of nurses had more than five years of professional experience, accounting for 149 respondents (47.8%). Furthermore, most respondents worked in high-complexity service units such as the Intensive Care Unit (ICU), Emergency Department, and Medical Ward, which require optimal adaptability and resilience.

Descriptive Analysis of Research Variables

Descriptive analysis was conducted to describe the data distribution of each research variable.

Variable	Mean	Standard Deviation	Category
Organizational Support	4.11	0.61	High
Work Engagement	4.08	0.58	High
Psychological Well-Being	3.97	0.64	High
Work Environment	3.89	0.67	Good
Workload	3.76	0.72	High
Nursing Resilience	4.05	0.59	High
Nursing Work Efficiency	4.14	0.56	High

The analysis results indicate that nursing personnel demonstrated relatively high levels of resilience and work efficiency despite facing the complex work pressures characteristic of specialist hospitals.

Outer Model Analysis

Outer model analysis was conducted to evaluate the validity and reliability of the research constructs.

Convergent Validity

The convergent validity test results demonstrated that all indicators had loading factor values greater than 0.70, thereby meeting the criteria for convergent validity. Additionally, the Average Variance Extracted (AVE) values for all constructs exceeded 0.50.

Variable	AVE
Organizational Support	0.712
Work Engagement	0.731
Psychological Well-Being	0.704
Work Environment	0.689
Workload	0.671
Nursing Resilience	0.745
Nursing Work Efficiency	0.756

These findings indicate that all constructs demonstrated adequate capability in explaining the variance of their indicators.

Discriminant Validity

Discriminant validity testing was conducted using the Fornell–Larcker Criterion and the Heterotrait–Monotrait Ratio (HTMT).

All HTMT values were below 0.90, indicating that each construct demonstrated satisfactory discriminant validity among the research variables.

Composite Reliability and Cronbach's Alpha

The reliability testing results showed that all variables had composite reliability and Cronbach's alpha values greater than 0.70.



Variable	Composite Reliability	Cronbach's Alpha
Organizational Support	0.912	0.886
Work Engagement	0.924	0.901
Psychological Well-Being	0.903	0.871
Work Environment	0.895	0.854
Workload	0.887	0.841
Nursing Resilience	0.931	0.912
Nursing Work Efficiency	0.938	0.918

Thus, all research instruments were declared reliable.

Inner Model Analysis

R-Square (R²) Values

The R-square value was used to measure the ability of independent variables to explain dependent variables.

Endogenous Variable	R-Square
Nursing Resilience	0.682
Nursing Work Efficiency	0.711

The results indicate that organizational support, work engagement, psychological well-being, work environment, and workload explained 68.2% of the variance in nursing resilience. Meanwhile, nursing resilience explained 71.1% of the variance in nursing work efficiency. These values indicate strong predictive capability of the model.

Predictive Relevance (Q²)

The predictive relevance analysis produced the following value: $Q^2 = 0.534$

This value is greater than zero, indicating that the model possesses good predictive relevance.

Effect Size (f²)

The effect size analysis demonstrated that:

- Work engagement had the strongest influence on nursing resilience.
- Nursing resilience exerted a strong influence on nursing work efficiency.

Hypothesis Testing

Hypothesis testing was conducted using the bootstrapping procedure in SmartPLS 4.

Hypothesis	Path Coefficient	T-Statistics	P-Value	Decision
Organizational Support → Nursing Resilience	0.281	4.982	<0.001	Accepted
Work Engagement → Nursing Resilience	0.354	6.441	<0.001	Accepted
Psychological Well-Being → Nursing Resilience	0.217	3.998	<0.001	Accepted
Work Environment → Nursing Resilience	0.192	3.112	0.002	Accepted
Workload → Nursing Resilience	-0.169	2.875	0.004	Accepted
Nursing Resilience → Nursing Work Efficiency	0.742	11.286	<0.001	Accepted

The bootstrapping results indicate that all research hypotheses were accepted.

Mediating Effect of Nursing Resilience

The mediation analysis revealed that nursing resilience significantly mediated the relationships between organizational support, work engagement, psychological well-being, work environment, workload, and nursing work efficiency. The indirect effect results are presented as follows:

Mediation Relationship	Indirect Effect	P-Value
Organizational Support → Nursing Resilience → Work Efficiency	0.208	<0.001
Work Engagement → Nursing Resilience → Work Efficiency	0.263	<0.001
Psychological Well-Being → Nursing Resilience → Work Efficiency	0.161	<0.001



Mediation Relationship

	Indirect Effect P-Value	
Work Environment → Nursing Resilience → Work Efficiency	0.142	0.002
Workload → Nursing Resilience → Work Efficiency	-0.125	0.005

These findings indicate that nursing resilience serves as an important psychological mechanism in improving nursing work efficiency.

Goodness of Fit Model

The goodness-of-fit evaluation demonstrated that the research model exhibited a satisfactory level of fit.

Model Fit Indicator Value

SRMR	0.061
NFI	0.913
RMS Theta	0.082

These values indicate that the SEM-PLS model fulfilled the recommended model fit criteria for modern SEM-based research.

Discussion

The Influence of Organizational Support on Nursing Resilience

The findings revealed that organizational support had a positive and significant influence on nursing resilience among nursing personnel at King Fahad Specialist Hospital. These findings indicate that organizational support is an important factor in strengthening nurses' psychological adaptability in dealing with the complex and dynamic work pressures of specialist hospitals.

This finding supports the Job Demands–Resources (JD-R) Theory, which explains that organizational support constitutes a job resource capable of reducing the negative impact of job demands and enhancing psychological resilience. In highly complex hospital environments, organizational support helps nurses maintain psychological stability and coping capacity against work-related stress.

Empirically, nurses who perceived strong organizational support tended to demonstrate better adaptability, lower work stress, and more optimal work performance despite high work demands. The researchers assume that organizational support functions as a protective organizational mechanism that helps nurses preserve psychological energy when facing the pressures of critical patient care.

The Influence of Work Engagement on Nursing Resilience

The study findings demonstrated that work engagement had a positive and significant influence on nursing resilience. Nurses with high levels of work engagement were more capable of maintaining psychological resilience while facing specialist hospital work pressures.

This finding supports JD-R Theory, which posits that work engagement represents a motivational process that strengthens individuals' psychological resources and enhances coping capacity against job demands.

In specialist hospital settings, work engagement helps nursing personnel maintain enthusiasm, patient-centered focus, and professional commitment despite facing emotional pressures and healthcare service complexities. The researchers assume that work engagement acts as a psychological motivational resource that strengthens nurses' mental capacity in adapting to the dynamics of modern healthcare services.

The Influence of Psychological Well-Being on Nursing Resilience

The results indicated that psychological well-being had a positive and significant effect on nursing resilience. These findings demonstrate that nurses' psychological well-being is a critical factor in enhancing adaptability and psychological stability within hospital work environments.

Psychological well-being encompasses positive emotional conditions, life satisfaction, self-control, healthy interpersonal relationships, and the ability to maintain psychological balance under work-related stress.



This finding supports the Conservation of Resources Theory, which explains that individuals strive to preserve psychological resources to reduce stress and maintain work effectiveness.

Nurses with higher levels of psychological well-being demonstrated greater capacity to manage stress, maintain emotional stability, and sustain patient care quality even in high-pressure work situations.

The Influence of Work Environment on Nursing Resilience

The findings showed that the work environment had a positive and significant effect on nursing resilience. A supportive, safe, and collaborative work environment plays an essential role in strengthening nurses' psychological resilience.

The hospital work environment encompasses not only physical conditions but also psychosocial aspects such as team communication, leadership, organizational culture, interpersonal relationships, and professional support.

In specialist hospital settings, positive work environments facilitate multidisciplinary coordination and effective professional communication, thereby reducing interpersonal conflict and improving healthcare service effectiveness.

The Influence of Workload on Nursing Resilience

The study demonstrated that workload had a negative and significant effect on nursing resilience. Increased work pressure, long shifts, and the complexity of patient care reduced nurses' psychological adaptability.

In specialist hospitals, nursing personnel face high service demands that frequently lead to emotional exhaustion, work stress, and burnout, ultimately decreasing psychological resilience and healthcare service quality.

The researchers assume that workload overload contributes to the depletion of psychological resources, thereby reducing nurses' psychological energy and coping ability in handling hospital work pressures.

The Influence of Nursing Resilience on Nursing Work Efficiency

The findings indicated that nursing resilience had a positive and significant effect on nursing work efficiency. Psychological resilience emerged as a strategic factor in improving work productivity, patient care quality, work-time effectiveness, and nurses' adaptability.

Nurses with high resilience levels were more capable of:

- Managing work-related stress,
- Maintaining emotional stability,
- Reducing interpersonal conflict,
- Sustaining patient care quality,
- Enhancing multidisciplinary teamwork,
- Maintaining focus during critical situations.

These findings support the Conservation of Resources Theory, which explains that psychological resilience enables individuals to preserve psychological resources and improve work behavior effectiveness.

In specialist hospital settings, resilience serves as a psychological adaptive mechanism that enables nursing personnel to remain productive and professional despite the high pressures of healthcare service delivery.

4. CONCLUSION

This study aimed to analyze the determinant factors influencing nursing resilience and nursing work efficiency at King Fahad Specialist Hospital using an SEM-PLS approach based on the Job Demands-Resources Theory and Conservation of Resources Theory.

The findings demonstrated that nursing resilience had a positive and significant effect on nursing work efficiency. Nurses with high resilience levels were better able to adapt to work pressure, maintain



psychological stability, improve work focus, and sustain healthcare service quality within complex and dynamic hospital environments.

The study also found that organizational support, work engagement, psychological well-being, and supportive work environments were important factors contributing to enhanced nursing resilience. Strong organizational support improved psychological safety, work motivation, and nurses' coping abilities in responding to modern healthcare service pressures. Additionally, work engagement enhanced professional dedication, work energy, and nurses' emotional involvement, thereby improving work efficiency.

Theoretically, the findings reinforce the Job Demands–Resources Theory and Conservation of Resources Theory, emphasizing that personal resources and organizational resources play strategic roles in helping individuals adaptively cope with job demands and maintain work effectiveness.

Based on the findings, hospitals are recommended to develop resilience training programs, psychological support systems, employee well-being initiatives, and stronger organizational support and supportive work cultures. Nursing education institutions should also integrate resilience, emotional intelligence, and stress management into nursing curricula. Future studies are recommended to employ longitudinal designs and mixed-methods approaches to gain a more comprehensive understanding of nursing resilience dynamics within modern healthcare environments.

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