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THE PULSE OF NURSING: MEASURING NURSES' WORK ENGAGEMENT

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ABSTRACT

As nurses represent frontline employees and play the role of boundary spanners, their attitudes and behaviours will significantly influence quality of healthcare services. This is especially true for public hospitals because one such favourable attitude that has been shown to positively affect the display of good job performance is work engagement. Therefore, to ensure the delivery of high-quality care to the public, it is essential that nurses exhibit positive attitudes through active work engagement. This study examined the level of work engagement among nurses, focusing on its three dimensions: vigor, dedication, and absorption. Work engagement was measured using the shortened nine-item version of the Utrecht Work Engagement Scale (UWES-9). The sample consisted of 420 staff nurses from three public hospitals in Peninsular Malaysia. Descriptive analysis revealed that nurses demonstrated a moderate to high level of overall work engagement. In particular, scores for vigor and dedication were high, while the absorption dimension registered a moderate level.

KEYWORDS: Work engagement, COR theory, healthcare, nurses, UWES-9.

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1.0 INTRODUCTION

Nurses are integral to healthcare systems, significantly contributing to the continuity, accessibility, and quality of care, particularly in the public hospitals when patient volumes are high and resources are constrained. However, the global healthcare workforce is experiencing significant strain. The World Health Organization anticipates a deficit of up to 10 million healthcare professionals by 2030, predominantly comprising nurses (Boniol et al., 2022). Nurses in numerous public hospitals frequently experience overwhelming conditions due to chronic understaffing, intense workloads, heavy administrative responsibilities, and the emotional burden of delivering continuous patient

care. These problems adversely impact both wellbeing and jeopardize patient safety and staff retention. The COVID-19 pandemic highlighted the vulnerability of public health systems, exacerbating stress, burnout, and turnover among nurses globally (Ekingen et al., 2023; Zheng et al., 2025). Given these circumstances, it is more vital to understand the factors that sustain nurses' motivation, resilience, and dedication to their vocation.

A significant focus of ongoing study is work engagement - the extent to which nurses experience energy, dedication, and immersion in their professions. Elevated engagement levels correlate with enhanced job satisfaction, improved work performance, and reduced burnout and turnover, especially in high-pressure settings such as public hospitals (Contreras et al., 2020; Ghazawy et al., 2021; Zeng et al., 2022; Neuber et al., 2022). In environments with limited resources and significant constraints, fostering nurses' work engagement is not merely advantageous; it is crucial for maintaining quality care and a stable staff. Hence, this study aims to investigate the level of work engagement among nurses in Malaysian public hospitals, highlighting their commitment and motivation in the face of daily professional challenges.

2.0 LITERATURE REVIEW

2.1 Work Engagement

Work engagement, as defined by Schaufeli and Bakker (2004), is "a positive, fulfilling, work-related state of mind characterized by vigor, dedication, and absorption" (p. 295). It is the enthusiasm and passion individuals contribute to their jobs. Vigor denotes elevated energy levels and mental resilience, accompanied by a robust determination to persevere, especially in challenging circumstances. Dedication displays a profound sense of purpose, enthusiasm, and pride in one's work. Individuals who are committed frequently perceive their efforts as significant and regard barriers as challenges to overcome rather than burdens. Absorption refers to a state of fully involved in one's responsibilities, resulting in the perception that time accelerates, making it challenging to disengage from work due to its engaging and rewarding nature (Schaufeli & Bakker, 2004).

Research indicates that engaged employees exhibit better performance compared to their non-engaged employees (Bakker & Demerouti, 2008). According to Bakker and Demerouti (2008), there are four reasons to account for this situation. Initially, engaged employees frequently encounter pleasant emotions, like joy and enthusiasm. Secondly, engaged employees enjoy optimal health. Third, engaged employees cultivate their own professional and personal resources. Finally, engaged employees disseminate their engagement to others. Additionally, engaged employees are individuals that possess a profound commitment to their work. They are dedicated, engaged, and certain that their actions have a significant impact. They often align their own well-being and values with the objectives of their organization resulting in advantages for both the employee and the overall workplace (Schaufeli, 2021). Consequently, cultivating higher levels of engagement has emerged as a crucial objective for many organizations, since it is associated with enhanced performance, increased job satisfaction, and less turnover.

The Nursing Executive Center (NEC) defines engaged nurses as individuals who are motivated to perform at their highest capacity daily. They are not only intrinsically motivated but also dedicated

to the success of their organization, often exceeding expectations (Hisel, 2020). In nursing, work engagement holds distinct significance due to the profession's physically demanding and emotionally intense nature. The three characteristics of engagement: vigor, devotion, and absorption exhibit distinct manifestations in nursing. Vigor is seen in the energy and stamina required by nurses to navigate long shifts, personnel shortages, and emotionally intense circumstances, all while maintaining calm and efficiency. Dedication arises from a robust sense of purpose in one's profession, frequently associated with feelings of appreciation and support in the workplace. It may reduce burnout and enhance a nurse's dedication to the profession. Absorption is vital in high-pressure settings such as ICUs or emergency departments, when concentration, meticulousness, and promptness are crucial. Excessive immersion in work without adequate time for recovery might result in tiredness, underscoring the necessity for balance (Feng et al., 2025). Prior studies have repeatedly demonstrated that nurse engagement is a critical determinant of high-quality care delivery (Garcia-Sierra et al., 2016; Scott et al., 2022). As engagement levels decline, nurses may start to emotionally detach from their roles, potentially increasing their desire to leave the profession entirely (Cao, 2019).

Numerous studies (e.g., Jenaro et al., 2010; Othman & Aizzat, 2013; Zahrah et al., 2019; Othman et al., 2019; Mamari & Groves, 2023; Alkorashy & Alanazi, 2023) investigated the levels of work engagement and analysed the relationships between personal resources and job demands in relation to work engagement. Jenaro et al. (2010) performed a correlational study including 412 nurses, revealing that 33% exhibited high dedication, 20.4% demonstrated high vigor, and 36.7% showed high absorption. The study further identified that predictors of vigor and dedication included job position satisfaction, greater quality of working life, reduced social dysfunction, and lower stress related to patient care. Meanwhile, a study by Alkorashy and Alanazi (2023) examined work engagement levels and assesses the impact of personal and job-related factors on the dimensions of vigor, dedication, and absorption among nurses in a Saudi hospital. A self-report questionnaire was distributed to 426 staff nurses and 34 first-line nurse managers. Their findings indicated a significant level of work engagement, both overall ($M = 5.47$, $SD = 0.908$) and across all three dimensions. The dedication dimension exhibited the highest mean level of work engagement ($M = 5.68$, $SD = 1.027$), whereas the absorption dimension reported the lowest mean ($M = 5.27$, $SD = 0.968$). The research indicated that age, years of experience, and committee participation were highly correlated with work engagement.

In their qualitative study among 21 Omani nurses from four acute-care hospitals, Mamari and Groves (2023) conceptualized work engagement in nursing, identified its predictors, and proposed measures for improvement. Directed content analysis was employed to examine the interview transcripts. Findings revealed that nurses defined work engagement as positive state in which they physically, emotionally, and psychologically engaged with their work. Mental engagement of nurses persists with patients even during their off-duty hours. The study further revealed that organizational factors influencing work engagement included leadership, teamwork, autonomy, pay, and job demands. Individual factors influencing engagement comprised perceiving nursing as a rewarding profession. A social factor was family responsibilities. Additionally, proposed strategies to enhance engagement encompassed better pay and financial incentives, flexible work arrangements, an open-door policy, performance feedback, recognition, and provision of resources.

Furthermore, a study undertaken by Zahrah et al. (2019) examined the moderating role of religious spirituality on the association between workload and work engagement among 364 staff nurses in Malaysian public hospitals. The findings indicate that there is a relationship between workload and work engagement. However, religious spirituality does not moderate the relationship between workload and work engagement. In another study by Othman et al. (2019) involving 366 staff nurses working at public hospitals in West Malaysia, it was determined that all dimensions of psychological capital (optimism, hope, and resilience), with the exception of hope, positively influence nurses' work engagement. In addition, Othman and Nasurdin (2013) investigated the relationship between social support and work engagement using a cross-sectional study including 402 staff nurses employed in Malaysian public hospitals. The study demonstrated a positive relationship between supervisor support and work engagement; nevertheless, co-worker support exhibited no effect on work engagement.

2.2 Theory Related to Work Engagement

The Conservation of Resources (COR) theory, developed by Hobfoll (1989), offers a valuable framework for understanding the factors that enhance or decrease nurses' work engagement, particularly in challenging environments. COR theory posits that individuals are driven to acquire, safeguard, and retain valuable resources such as social support, energy, and autonomy. When these resources are lost or threatened, it creates stress. In the nursing profession, characterized by emotional strain, physical fatigue, and substantial workloads, access to adequate resources is crucial. Supportive leadership, strong teamwork, equitable workloads, and opportunities for input and autonomy can significantly impact outcomes. Nurses who perceive the availability of these resources are more inclined to exhibit vigor and dedication in their roles, resulting in enhanced job performance, increased satisfaction, and a less likelihood of burnout. Conversely, if nurses continuously use their energy without receiving adequate support or recovery, it may result in emotional exhaustion and disengagement (Hobfoll et al., 2018). Recent studies support this theory, indicating that job demands diminish resources, but job and personal resources, including psychological capital and structural empowerment, preserve and boost engagement among nurses (Zhang et al., 2025; Park & Ha, 2025).

Consequently, COR theories emphasize that employers should not only manage demands but also proactively invest in resources that enable nurses to feel supported, competent, and valued. Establishing and sustaining these resources is essential for ensuring nurses remain engaged, motivated, and capable of providing the high-quality care that patients depend on.

3.0 RESEARCH METHODS

3.1 Samples and Procedures

Upon receiving approval from the Medical Research Ethical Committee (MREC) of the Malaysian Ministry of Health (MOH), a cross-sectional study was conducted in three public hospitals in Peninsular Malaysia. The participants comprised staff nurses employed at these hospitals. A total of 500 self-administered questionnaires were distributed with assistance from the Matron Offices. The distribution and collection of the completed questionnaires took approximately one month. Of the 500 distributed, 420 were returned, yielding a response rate of 84%.

3.2 Instrument

Work engagement was assessed using the shortened nine-item version of the Utrecht Work Engagement Scale (UWES-9) developed by Schaufeli and Bakker (2003). The UWES-9 comprises three dimensions, each assessed with three items: vigor, dedication, and absorption. For instance, “When I get up in the morning, I feel like going to work”, “I am proud of the work that I do”, and “I get carried away when I am working”. Participants provided responses on a seven-point Likert scale ranging from 1 = “never” to 7 = “always”. The Cronbach's alpha for this scale is 0.90.

3.3 Statistical Analysis

The participants' demographic information was presented utilizing frequencies and percentages to offer a clear summary of the sample's characteristics. Descriptive statistical methods were employed to examine the data, including analyses of frequency, percentage, mean, and standard deviation (SD). The statistical techniques were utilized to establish the general profile of the participating nurses, including age, gender, marital status, ethnicity, and job tenure, as well as to measure their level of work engagement. The analysis specifically sought to measure each participant's work engagement across the three dimensions: vigor, dedication, and absorption. Through the implementation of these measures, the study successfully identified the distribution and central tendencies of the data, providing significant perspectives into the patterns and intensity of work engagement among the nursing workforce.

4.0 RESEARCH FINDINGS

4.1 Profile of Respondents

All 420 participants in this study were female nurses (100%), with ages ranging from 23 to 56 years ($M = 36.34$, $SD = 7.92$). The majority were married, with 391 staff nurses (93.10%), while the remaining were unmarried. The majority ethnicity among the nurses was Malay (97.38%), followed by Chinese (1.67%) and Indian (0.95%). Participants had an average tenure of 12.27 years as staff nurses ($SD = 7.21$). The profile of respondents of this study is summarized in Table 1.

Table 1: Profile of Respondents

Demographic Factor	Category	Frequency	Percentage (%)
Gender	Female	420	100
	Male	0	0
Marital Status	Married	391	93.10
	Unmarried	29	6.90
Ethnicity	Malay	409	97.38
	Chinese	7	1.67
	Indian	4	0.95
Age (yr.)	Mean	Standard Deviation	
	36.34	7.92	
Job Tenure (yr.)	12.27	7.21	

4.2 Descriptive Analysis of Work Engagement

This section explains a descriptive analysis of nurses' perceptions of work engagement, comprising mean scores, standard deviations, and percentage distributions across nine items. All items were assessed utilizing a seven-point Likert scale, ranging from 1 ("Never") to 7 ("Always"), comprising three dimensions of work engagement: vigor, dedication, and absorption. A detailed summary of the descriptive analysis is presented in Table 2.

The first item measuring vigor, "When I get up in the morning, I feel like going to work", yielded a mean score of 4.70 and a standard deviation (SD) of 1.409. Regarding the scale score, almost 33% of nurses chose "Sometimes", followed by 31% responded "Rarely", and 21.7% indicated "Often". Their score indicates the majority possess a slightly positive perception and motivation toward work in the morning. Interestingly, item number 2 ("At my work, I feel bursting with energy") and item number 3 ("At my job, I feel strong and vigorous") showed slightly higher mean scores of 5.55 and 5.63, respectively, both with relatively low SDs of 1.063 and 1.044. As depicted in the table, majority of nurses responded to these items within the "Often" to "Always" scale. These findings show the good and positive nature of emotional and physical engagement in the workplace.

The second dimension of work engagement is dedication. Of the three items measured, the item "I am proud of the work that I do" achieved the highest mean score of 6.19, with SD of 0.926. The positive perception was similarly observed for the item "I am enthusiastic about my job", which had a mean score of 5.75 and SD of 1.022. The final item indicated that the measure of nurses' dedication, "My job inspires me", scored a high average mean of 5.64 with SD of 1.049. Approximately 33% selected "Often", followed by "Very Often" (29%), and "Always" (25%). These responses reveal a strong emotional attachment to their professional roles and responsibilities, highlighting their high level of dedication. The final dimension of work engagement is absorption. As with the other two components, three items were employed to measure absorption. The items "I get carried away when I am working" and "I am immersed in my work" yielded mean scores of 4.25 (SD=1.562) and 4.29 (SD=1.481), respectively. The final item, "I feel happy when I am working intensely," scored a mean of 5.62 with SD of 1.235. This finding indicates that not all nurses have full concentration while working.

Overall, the results reveal that the level of work engagement among nurses is relatively high when considering the scores for both vigor and dedication. This aligns with the findings of Alkorashy and Alanazi (2023), which indicate a high level of work engagement among nurses in Saudi Arabia (mean of 5.47 and SD of 0.908) across all three dimensions. The dedication dimension exhibited the highest mean level of work engagement ($M = 5.68$, $SD = 1.027$), while the absorption dimension recorded the lowest mean ($M = 5.27$, $SD = 0.968$). They generally experience motivation, inspiration, enthusiasm, and pride in their jobs. Nevertheless, a lower absorption score suggests that despite their strong motivation and commitment, they may encounter significant challenges in areas such as engagement and adverse working conditions.

Table 2: Frequency, percentage, mean and standard deviation scores for work engagement

No	Item	Mean	SD	Scale						
				Never	Almos t Never	Rarely	Sometime s	Often	Very Often	Always
1	When I get up in the morning, I feel like going to work.	4.70	1.409	7 (1.7%)	13 (3.1%)	49 (11.7%)	140 (33.3%)	91 (21.7%)	59 (14.0%)	61 (14.5%)
2	At my work, I feel bursting with energy	5.55	1.063	0	2 (.5%)	8 (1.9%)	54 (12.9%)	142 (33.8%)	119 (28.3%)	95 (22.6%)
3	At my job, I feel strong and vigorous.	5.63	1.044	1 (.2%)	0	7 (1.7%)	45 (10.7%)	144 (34.3%)	120 (28.6%)	103 (24.5%)
4	My job inspires me.	5.64	1.049	0	1 (.2%)	9 (2.1%)	44 (10.5%)	139 (33.1%)	122 (29.0%)	105 (25.0%)
5	I am enthusiastic about my job.	5.75	1.022	0	1 (.2%)	4 (1.0%)	41 (9.8%)	126 (30.0%)	127 (30.2%)	121 (28.8%)
6	I am proud of the work that I do	6.19	.926	0	0	3 (.7%)	18 (4.3%)	76 (18.1%)	124 (29.5%)	199 (47.4%)
7	I get carried away when I am working.	4.25	1.562	27 (6.4%)	24 (5.7%)	78 (18.6%)	112 (26.7%)	77 (18.3%)	73 (17.4%)	29 (6.9%)
8	I am immersed in my work.	4.29	1.481	20 (4.8%)	27 (6.4%)	71 (16.9%)	116 (27.6%)	86 (20.5%)	78 (18.6%)	22 (5.2%)
9	I feel happy when I am working intensely.	5.62	1.235	5 (1.2%)	1 (.2%)	17 (4.0%)	46 (11.0%)	103 (24.5%)	131 (31.2%)	117 (27.9%)

5.0 DISCUSSION

The descriptive analysis offers crucial perspective into nurses' work engagement through three dimensions: vigor, dedication, and absorption. In particular, the findings reveal that the majority of nurses display moderate to high levels of work engagement, clearly clarified across the three dimensions. The items "I am enthusiastic about my job" and "I am proud of the work that I do" had the highest mean scores and lowest SD, thus illustrating work engagement. One plausible explanation is that most nurses possess substantial experience, passion, and pride in their professional roles. This pertains to their key job descriptions that provide opportunities to assist and heal patients, potentially yielding emotional rewards. Mamari and Groves (2023) assert that an important feature of nursing is the deep sense of purpose that nurses derive from their roles. This sense of purpose arises from the intrinsic value of caring for others, promoting health, and

alleviating suffering, in which nurses are actively involved physically, emotionally, and psychologically in their job.

Meanwhile, two items of vigor gained positive value among nurses. The findings indicate that the items “At my work, I feel bursting with energy” and “At my job, I feel strong and vigorous” received positive responses, suggesting that nurses are emotionally and mentally prepared to confront challenges related to their tasks. Unfortunately, the item “When I get up in the morning, I feel like going to work” exhibits a relatively low level of work engagement, along with varied perceptions throughout the scale. This indicator implies that while they are prepared to exert additional effort in their jobs, some may struggle to sustain energy due to excessive workload and inadequate support and resources. This perception may be justified if the nature of the task and working environment in the healthcare sector are primarily addressed. Several research argued that challenges are prevalent in global healthcare systems and significantly affect both nurses and patient outcomes, as well as the overall efficiency of healthcare delivery (Jenaro et al., 2010; Mamari & Groves, 2023).

The most significant difference in the perception of work engagement scores is observed in the absorption dimension. The items “I get carried away when I am working” and “I am immersed in my work” had the lowest mean scores and the highest SD, showing variation in nurses' engagement in their professions. This situation may be affected by workload, ambiguous roles, and distractions during work. This may explain why nurses struggle to perform effectively or experience dissatisfaction in their job due to heavy workload (Zahrah et al., 2019). Conversely, the item “At my job, I feel strong and vigorous” indicated a higher level of agreement, demonstrating that the majority of nurses attain a profound level of engagement and commitment when handling difficult and challenging tasks (Alkorashy & Alanazi, 2023; Jenaro et al., 2010). Despite nurses seem primarily dedicated and vigorous in their roles, improvements may be necessary to foster their engagement or involvement in tasks.

6.0 CONCLUSION

This research indicates that nurses are highly engaged in their work, particularly with their vigor and dedication. They consistently demonstrate passion, resilience, and a strong determination to excel, even under difficult situations. Their dedication to their responsibilities and the care they deliver is evident as they are not only doing a task, they are putting their passion into it. Nonetheless, the findings indicate a more moderate score in the dimension of absorption, which refers to being fully focused and “in the zone” while work. This shows that frequent interruptions or distractions at work may be hindering work engagement among nurses. To enhance nurses' sense of engagement and immersion in their work, it is essential to minimize unnecessary disturbances and provide them greater autonomy in performing their tasks. When nurses are trusted to lead and make decisions autonomously, they are more inclined to feel empowered and engaged. Promoting such a supportive environment not only enables nurses to engaged and performed but also enhances the quality of patient care.

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REFERENCES

- [1] H. Alkorashy, & M. Alanazi, "Personal and Job-Related Factors Influencing the Work Engagement of Hospital Nurses: A Cross-Sectional Study from Saudi Arabia," *Healthcare*, 11(4), pp. 572-596, 2023. doi: 10.3390/healthcare11040572.
- [2] A.B. Bakker, & E. Demerouti, "Towards a Model of Work Engagement," *Career Development International*, 13(3), pp. 209-223, 2008.
- [3] M. Boniol, T. Kunjumen, T.S. Nair, A. Siyam, J. Campbell, & K. Diallo, "The Global Health Workforce Stock and Distribution in 2020 and 2030: A Threat to Equity and 'Universal' Health Coverage?," *BMJ Global Health*, 7, e009316, 2022. doi:10.1136/bmjgh-2022-009316
- [4] Y. Cao, J. Liu, K. Liu, M., Yang, & Y. Liu, "The Mediating Role of Organizational Commitment between Calling and Work Engagement of Nurses: A Cross-Sectional Study," *International Journal of Nursing Science*, 6(3), pp. 309-314, 2019.
- [5] F. Contreras, J. C. Esinosa, & G. A. Esguerra, "Could Personal Resources Influence Work Engagement and Burnout? A Study in a Group of Nursing Staff," *SAGE Open*, 2020. doi.org/10.1177/2158244019900563
- [6] E. Ekingen, M. Teleş, A. Yıldız, & M. Yıldırım, "Mediating Effect of Work Stress in the Relationship between Fear of COVID-19 and Nurses' Organizational and Professional Turnover Intentions," *Archives of Psychiatric Nursing*, 42, pp. 97-105, 2023. doi: 10.1016/j.apnu.2022.12.027
- [7] Y. Feng, S. Li, W. Ma, Y. Chen, J. Zhang, H. Luo, & B. Xue, "The Relationship between Compassion Fatigue, Engagement and Decent Work among Nurses: A Cross-sectional Study," *BMC Nursing*, 24, 74, 2025. doi.org/10.1186/s12912-025-02721-w
- [8] R. Garcia-Sierra, J. Fernandez-Castro, & F. Martinez-Zaragoza, "Work Engagement in Nursing: An integrative Review of the Literature," *Journal of Nursing Management*, 24(2), pp. 101-111, 2016. doi.org/10.1111/jonm.12312
- [9] E. R. Ghazawy, E. M. Mahfouz, E. S. Mohammed, & S. A. Refaei, "Nurses' Work Engagement and Its Impact on the Job Outcomes," *International Journal of Healthcare Management*, 14(2), 2021. doi.org/10.1080/20479700.2019.1644725
- [10] M. E. Hisel, "Measuring Work Engagement in a Multigenerational Nursing Workforce," *Journal of Nursing Management*, 28(2), pp. 294-305, 2020.
- [11] S. E. Hobfoll, "Conservation of Resources: A New Attempt at Conceptualizing Stress," *American Psychologist*, 44(3), pp. 513-524, 1989. doi.org/10.1037/0003-066X.44.3.513
- [12] S. E. Hobfoll, J. Halbesleben, J. P. Neveu, & M. Westman, "Conservation of Resources in the Organizational Context: The Reality of Resources and their Consequences," *Annual Review of Organizational Psychology and Organizational Behavior*, 5, pp. 103-128, 2018. doi.org/10.1146/annurev-orgpsych-032117-104640
- [13] C. Jenaro, N. Flores, B.M. Orgaz, & M. Cruz, "Vigour and Dedication in Nursing Professionals: Towards a Better Understanding of Work Engagement," *Journal of Advanced Nursing*, 67(4), pp. 865-75, 2010. DOI:10.1111/j.1365-2648.2010.05526.x

- [14] H.L. Mamari, & P.S. Groves, "Work Engagement among Acute Care Nurses: A Qualitative Study," *Nursing Research and Practice*, 1, 2023. doi.org/10.1155/2023/2749596
- [15] L. Neuber, C. Englitz, N. Schulte, B. Forthmann, & H. Holling, "How Work Engagement Relates to Performance and Absenteeism: A Meta-analysis," *European Journal of Work and Organizational Psychology*, 31(2), pp. 292-315, 2022. doi.org/10.1080/1359432X.2021.1953989
- [16] N. Othman, & A. M. Nasuridin, "Social Support and Work Engagement: A Study of Malaysian Nurses," *Journal of Nursing Management*, 21, pp. 1083-1090, 2013. DOI:10.1111/j.1365-2834.2012.01448.x
- [17] N. Othman, Z. Ghazali, F. C. W. Chuah, & A. M. Nasuridin, "Are Nurses Engaged with Their Work? Exploring the Impact of Psychological Capital," *Science International (Lahore)*, 31(5), pp. 813-817, 2019.
- [18] S. Park, & Y. Ha, "The Relationship between Positive Psychological Capital and Work Engagement in Clinical Nurses: Mediation Effect of Job Crafting," *BMC Nursing*, 24, 117, 2025. doi.org/10.1186/s12912-024-02600-w
- [19] W. Schaufeli, "Engaging Leadership: How to Promote Work Engagement?," *Frontiers Psychology*, 12:754556, 2021. doi.org/10.3389/fpsyg.2021.754556
- [20] W. B. Schaufeli, & A. B. Bakker, "Job Demands, Job Resources and Their Relationship with Burnout and Engagement: A Multi-sample Study," *Journal of Organizational Behaviour*, 25, pp. 293-315, 2004.
- [21] W. Schaufeli, A. Bakker, & M. Salanova, "The Measurement of Work Engagement with a Short Questionnaire: A Cross-National Study," *Educational and Psychological Measurement*, 66, pp. 701-716, 2006. doi.org/10.1177/0013164405282471
- [22] G. Scott, A. Hogden, R. Taylor, & E. Mauldon, "Exploring the Impact of Employee Engagement and Patient Safety," *International Journal of Quality Health Care*, 34(3), 2022.
- [23] M. Y. Yasin, A. Alomari, A. Al-Hamad, & V. Kehyayan, "The Impact of COVID-19 on Nurses' Job Satisfaction: A Systematic Review and Meta-analysis," *Frontiers in Public Health*, 11, 1285101, 2023. doi.org/10.3389/fpubh.2023.1285101
- [24] N. Zahrah, A. Aziz, & S.N.A. Hamid, "Workload and Work Engagement among Nurses in Public Hospitals: Moderating Role of Religious Spirituality," *International Journal of Management, Accounting and Economics*, 6(4), pp. 297-312, 2019.
- [25] D. Zeng, N. Takada, Y. Hara, S. Sugiyama, Y. Ito, Y. Nihei, & K. Asakura, "Impact of Intrinsic and Extrinsic Motivation on Work Engagement: A Cross-sectional Study of Nurses Working in Long-term Care Facilities," *International Journal of Environmental Research and Public Health*, 19, 1284, 2022. doi.org/10.3390/ijerph19031284
- [26] Y. Zhang, R. Qiu, Y. Wang, & Z. Ye, "Navigating the Future: Unveiling New Facets of Nurse Work Engagement," *BMC Nursing*, 24, 80, 2025. doi.org/10.1186/s12912-024-02517-4
- [27] J. Zheng, S. Feng, Y. Feng, L. Wang, R. Gao, & B. Xue, "Relationship between Burnout and Turnover Intention among Nurses: A Network Analysis," *BMC Nursing*, 23, 921, 2024. doi.org/10.1186/s12912-024-02624-2