

THE EFFECT OF ACADEMIC MODEL SUPERVISION ON THE WORKLOAD AND STRESS OF NURSES IN HOSPITALS: A LITERATURE REVIEW

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KEYWORDS	ABSTRACT
Supervision, Academic Model, Workload, Stress, Nurses.	Nurses often face high workloads and significant levels of stress due to the demands of complex work and high pressure. The academic supervision model is important because it can help nurses manage workload, improve skills and knowledge, and reduce stress levels. Effective supervision is expected to improve the quality of health services, job satisfaction, and have a positive impact on patients and the health system as a whole. This study aims to determine the influence of academic model supervision on the workload and stress of nurses in hospitals. This study uses a literature review method from research articles in the Scopus and Google Scholar databases published in 2014-2023 with the keywords "Supervision", "Academic Model", "Nurse Workload", and "Nurse Stress". Based on the analysis of 22 research articles, it was found that the supervision of the academic model had a positive impact on nurse performance, job satisfaction, work motivation, quality of nursing care, reduction of stress levels, and improvement of overall health service quality. Academic model supervision can help nurses improve skills and knowledge, improve services provided, develop professionalism, increase independence, improve nursing care, reduce workload, improve nurse performance, provide good emotional support, and continuous learning, and reduce the level of stress experienced by nurses. The implications of this research suggest that implementing academic model supervision in hospitals can lead to better nurse outcomes, including enhanced job satisfaction, reduced stress, and improved quality of care. Consequently, this can result in higher patient satisfaction and a more efficient and effective health care system overall.

INTRODUCTION

Nurses are one of the important professions in the health care system, especially in hospitals. Nurses are responsible for various aspects of patient care, from assessment, diagnosis, and intervention to evaluation. Nurses play an important role in managing and preventing disease complications, improving patients' quality of life, and acting as a bridge between doctors, families, primary care, and hospital care (Fabrellas et al., 2020). Nurses' workload in hospitals is often high and complex, with diverse and ongoing demands. This can be stressful and negatively impact nurses' mental and physical health, as well as the quality of care provided.

High nursing workload significantly impacts the stress level of nurses in hospitals. The results of the study stated that workload is a significant factor affecting fatigue in nurses due

to the direct relationship between workload and level of stress (Zare et al., 2021). In addition, high workload contributes to missed care activities, increased patient length of stay, high readmission rates, patient safety errors, and nosocomial infections (McVey, 2023). Nurses working under high work pressure and heavy workloads are more likely to experience turnover intention (Lee & Kim, 2020). Other studies have also shown that a high nursing workload jeopardizes the quality of nursing care delivery to patients, jeopardizes patient safety, and negatively impacts nurses' well-being (Banda et al., 2022).

The relationship between workload and job stress among nurses is an important area to research, as excessive workload leads to increased levels of stress among nurses (Adriani et al., 2022). Nurses who work in high-stress environments due to workload experience a negative impact on their job satisfaction, productivity, and overall well-being. (Miller & Hemberg, 2023).. In addition, stress due to workload balances nurses' work life and concentration at work and can lead to other health-related issues (Nair, 2021). Research results have also found that workload is a significant predictor of burnout among nurses, with heavy workload being one of the most common reasons for nurses to consider leaving their jobs (Dwinijanti et al., 2020); (Yestiana et al., 2019). Nurses' responsiveness to patients' needs, good stress management, and emotional labour significantly affect service quality and patient satisfaction in hospitals. (Dewi & Santoso, 2020); (Ko et al., 2020); (Mahmoud et al., 2021); (Robat et al., 2021). One of the efforts to control workload and stress levels in nurses is through supervision.

Supervision is one strategy that can be used to help nurses manage workload and stress. Research states that adequate supervision can significantly help in reducing the effects of workload on job stress among nurses. (Kokoroko & Sanda, 2019).. Regular supervision plays a crucial role in reducing implicit rationing of nursing care, emotional exhaustion, and burnout, ultimately leading to improved quality of nursing care. (Maghsoud et al., 2022).. In addition, quality supervision can act as a mediator in the relationship between workload, job satisfaction, organizational commitment, and nurses' intention to care for patients. (Sharif Nia et al., 2021).. Conversely, inadequate supervision may exacerbate the impact of a high nursing workload, resulting in adverse outcomes. For example, decreasing nurse-patient ratios in intensive care units have been associated with increased rates of problems such as medication self-administration, lack of supervision, and documentation errors (Almenyan et al., 2021).. During the COVID-19 pandemic, nurses working in high-stress environments due to heavy workloads require supportive supervision to manage stress effectively (İzci & Çetinkaya, 2022).. Adequate supervision can help reduce stress levels among nurses, thus positively affecting their performance and well-being. (Kudo & Toyoda, 2022).. In addition, regular clinical supervision has been shown to improve nurses' well-being, leading to improved patient care (Younge et al., 2020). One method of supervision in nursing services is academic model supervision. Academic model supervision is one of the relatively new supervision models and has shown positive results in several studies.

The academic Model of supervision focuses on the professional development of nurses through constructive feedback, mentoring, and continuous learning. This Model emphasizes collaboration between supervisors and nurses in identifying problems, developing solutions, and improving the quality of nursing practice. The academic Model of supervision for nurses

in hospitals involves a structured and educational approach to supervise and guide nursing staff to ensure the delivery of high-quality patient care. This form of supervision typically integrates theoretical knowledge with practical clinical skills to enhance nurses' competence and professional development. Academic model supervision often includes elements such as planning, directing, mentoring, teaching, observing, encouraging, and evaluating nursing staff in a fair and supportive manner as part of hospital services (Safan et al., 2020). The academic Model of supervision involves providing support for nurses to ensure safe and effective healthcare delivery, promoting professional development, enhancing clinical insight, and fostering stronger mutual relationships among nursing staff. (Mohamed & Mohamed Ahmed, 2019).. The academic Model of supervision also focuses on developing a set of skills in nurses that enable them to practice with excellence, identify areas for improvement, and maintain high standards of care. (Pinto & Carvalho, 2021). Furthermore, academic model supervision can involve the integration of clinical insight, personal trust, professional development, support, reflection, and improved standards of care (Mohamed & Mohamed Ahmed, 2019).

When the academic Model of supervision for nurses in hospitals is not carried out effectively, it can have various negative consequences. Inadequate supervision can result in increased levels of stress, burnout, and dissatisfaction among nursing staff (Singh et al., 2020). The absence of adequate academic model supervision may hinder the integration of nurse-led research initiatives, especially during critical periods such as the COVID-19 pandemic (Castro-Sánchez et al., 2021). Additionally, when supervision is lacking or ineffective, it can result in increased levels of stress, burnout, and counterproductive work behaviours among nurses (Low et al., 2021).

Although many studies have shown the benefits of academic model supervision, in-depth research is still needed to assess its effect on the workload and stress of nurses in hospitals. Research using the literature review method was used to comprehensively examine the effect of academic model supervision on the workload and stress of nurses in hospitals. The purpose of this research is to identify and analyze the influence of academic model supervision on nurses' workload and stress levels in hospital settings. The benefits of this research include providing insights for healthcare administrators and policymakers to implement effective supervision strategies that can improve nurse well-being, enhance job satisfaction, and ultimately lead to better patient care outcomes.

RESEARCH METHOD

This study uses the literature review method, namely by tracing research article documents from the Scopus and Google Scholar databases. Articles from these databases were selected based on the inclusion criteria: articles published in open access in 2019-2023 with the keywords "Supervision", "Academic Model", "Nurse Workload", "Nurse Stress", "Hospital", and articles in Indonesian or English. Exclusion criteria in this study were articles published in non-open access, published outside 2019-2023, and articles published not in Indonesian or English.

Table 1. Previous Research

No.	Researcher Name and Year	Journal Name	Research Title	Summary of Research Results
1	(Sulistiawati et al., 2022)	Silampari Nursing Journal Vol 6 (1) Year 2022	Academic Model Clinical Supervision on Nurse Executive Performance	The intervention method applied clinical supervision with an academic model. There were two groups in this study, namely the intervention group that received academic Model clinical supervision and the control group that did not receive the intervention. The number of respondents was 77 people. The results of this study show that the unpaired t-test p-value was 0.000 in the intervention control group, and the unpaired t-test obtained a p-value of 0.334 in the intervention group and 0.334 in the control group. The performance of executive nurses has increased significantly after the supervision of the academic Model.
2	(Atmaja et al., 2018)	Nurscope Journal of Nursing and Scientific Thought Volume 4 (6) The year 2018	The Effect of Academic Model Clinical Supervision on Nurses' Ability to Implement Patient-Centered Care (PCC) in Hospitals	The intervention method used was Academic Model clinical supervision training for room supervisors. This study used intervention and control groups. The number of respondents or research samples was 102 executive nurses of Mitra Siaga Tegal Hospital, with 26 nurses in the intervention group and 25 nurses in the control group. The study's results tested with one-way ANOVA resulted in a P-value of 0.000 for the improvement of the implementation of patient-centred care after supervision training. After supervision training, nurses' performance in implementing patient-centred care increased significantly, with a mean value of 11.19 in the intervention group.
3	(Abdillah & Basri, 2021)	KnE Life Sciences 594-612 Year 2021	The Effect of Clinical Model Supervision and Academic Model Supervision on Nursing Care at the Community Health Center of Sukabumi Regency	The intervention methods used were the clinical supervision model and the academic supervision model. This study had four groups: two intervention groups and two control groups. The total number of respondents or research samples was 40, with each group consisting of 10 people.

No.	Researcher Name and Year	Journal Name	Research Title	Summary of Research Results
4	(Jariah & Agustini, 2022)	Window of Nursing Journal Vol. 3 (1) Year 2022	The Effect of Nursing Supervision, Incentives and Work Motivation on Job Satisfaction in Nurses	<p>The results of this study were processed using a pseudo-experimental method with a pretest and posttest control design. The P-value of 0.000 shows that nurse performance improved after the academic model supervision intervention, as seen from the increase in the value of care effectiveness from week to week.</p> <p>The intervention method used in this study was the survey method. This study did not use an intervention group but instead collected data from the entire population that became the research sample, namely 58 nurses at the Baubau City Hospital.</p> <p>The results were analyzed using multiple linear regression method. The p-value for nursing supervision was 0.046, incentives were 0.037, and work motivation was 0.305. Nurses' job satisfaction is positively influenced by nursing supervision and incentives but not so significantly by work motivation.</p>
5	(Wagiono & Handiyani, 2019)	Enfermeria Clinica Volume 29 Year 2019 Scopus Q3	Correlation between nursing supervision and low back pain preventive behaviour among nursing staff in Hospital	<p>This study used a quantitative intervention method with a cross-sectional design. It was conducted on 141 nursing staff working in inpatient care facilities and outpatient care units from non-psychiatry departments at Marzoeeki Mahdi Hospital.</p> <p>The study's results were analyzed using descriptive statistical methods with frequencies and percentages before correlation analysis with Chi-square was conducted. The p-value found in this study was 0.015. In general, nurses' Low Back Pain (LBP) preventive behaviours tended to be considered inadequate, with 46.8% of respondents considering their LBP preventive behaviours inadequate.</p>
6	(Santoso et al., 2022)	Asian Journal for Public Opinion Research Vol. 10 (4)	Determinants of Hospital Nurse Burnout: The	<p>In this study, the intervention method used is supervision. Supervision has a role in</p>

No.	Researcher Name and Year	Journal Name	Research Title	Summary of Research Results
		Year 2022 Scopus Q3	Moderating Role of Supervision	moderating the impact of work intensity, customer contact, and self-efficacy on burnout experienced by nurses in hospitals. The study was conducted on 131 respondents or samples of nurses in hospitals spread across two different locations, namely Jakarta and Bogor. The study's results were analyzed using the Partial Least Square Structural Equation Modelling (PLS-SEM) method. Work intensity and self-efficacy significantly affect nurse burnout, while contact with customers has no significant effect. Supervision only significantly moderated the relationship between work intensity and burnout.
7	(Lee & Kim, 2020)	Healthcare Journal Vol. 11 (11) Year 2023 Scopus Q2	The Nursing Work Environment, Supervisory Support, Nurse Characteristics, and Burnout as Predictors of Intent to Stay among Hospital Nurses in the Republic of Korea: A Path Analysis	The intervention method used in this study was path analysis. This research was conducted using a cross-sectional study design. The number of respondents or samples in this study was 631 participants, who were nurses in seven public hospitals in Ulsan, South Korea. Burnout was the most influential predictor of ITS ($\beta=-0.36$, $p<0.001$). Nurses' participation in hospital affairs ($\beta=0.10$, $p=0.044$) and collegial nurse-doctor relationship ($\beta=0.08$, $p=0.038$) had a direct effect on ITS. Supervisory support had a significant direct effect on ITS ($\beta=0.19$, $p<0.001$).
8	(Matlhaba, 2023)	Health SA Gesonheid Vol. 28 (1) Year 2023 Scopus Q3	The perceived effects of generational diversity on the supervision of new professional nurses in public hospitals	The intervention method used in this study was an exploratory, descriptive and contextual qualitative approach. In this study, an intervention group consisting of operational managers in seven public hospitals in three of the four districts in the North West Province, South Africa. The number of respondents or research sample was 46 operational managers, with details of 5 men and 41 women. The results of the study were analyzed using a thematic

No.	Researcher Name and Year	Journal Name	Research Title	Summary of Research Results
9	(Budiyanto et al., 2019)	Journal of Public Health Vol. 8 (3) The year 2019 Scopus Q4	Factors Associated with Job Stress of Implementing Nurses in the Inpatient Room of Bethesda General Hospital Gmim Tomohon	analysis approach with the results of generational differences in nurses' work behaviour that can affect the supervision of new nurses in public hospitals. This study used a survey approach with primary data collection using a questionnaire. There was no intervention group. The number of respondents or research samples was 86 executive nurses, with a response rate of 83.9% (n=73). The study's results were analyzed using descriptive, bivariate, and multivariate analysis methods. Data analysis was carried out using the Chi-Square test and Logistic Regression and presented in the form of tables and diagrams. The p-value for the relationship between workload and work stress was 0.009, while the relationship between facilities/infrastructure and work stress was also 0.009. Nurses' stress tended to be mild, with 80.2% of respondents experiencing mild stress.
10	(Supratman & Sudaryanto, 2008)	Journal of Nursing Science News Vol. 1 (4) The year 2008	Models of Clinical Nursing Supervision	This study discusses models of clinical nursing supervision implemented in several Western countries. These models include the 4S Model developed by Page and Wosket, the Academic Model introduced by Farington, the Experiential Model introduced by Milne and James, and other models. Clinical supervision in hospitals in Indonesia still needs to be more optimal, with supervision activities tending to be more about supervision than guidance, observation, and assessment. The role of nursing supervisors is vital in ensuring quality nursing services. However, the implementation of the nursing clinical supervision model in Indonesia still needs to be clarified. Nursing supervisors, such as Rangers and Nursing Supervisors, have the responsibility of overseeing

No.	Researcher Name and Year	Journal Name	Research Title	Summary of Research Results
11	(Trigantara et al., 2019)	Fundamental and Management Nursing Journal Vol 2 (2) The year 2019	Proctor Model Clinical Supervision to Improve Ability to Perform Nursing Care	<p>nursing practice and providing guidance to implementing nurses. Clinical supervision is an effort to improve the expertise and skills of nurses and encourage members of the work unit to contribute actively to achieve organizational goals.</p> <p>This study used the Clinical Supervision of the Proctor Model as its intervention method. The total study sample consisted of 68 nurses, 34 of whom were in the intervention group and 34 of whom were in the control group. The results were analyzed using Wilcoxon and Mann-Whitney statistical methods. The p-value in this study was 0.000, indicating a significant difference in nurses' ability to perform nursing care after the implementation of the Proctor Model clinical supervision intervention.</p>
12	(Pratiwi et al., 2020)	Community of Publishing in Nursing Vol. 8 (1) The year 2020	Akademic-based Supervision of Healthcare Workers on Handwashing Compliance	<p>The intervention method used in this study is academic-based supervision, which provides guidance, teaching, and support to health workers in performing handwashing in accordance with established procedures.</p> <p>In this study, no intervention groups were compared. The study used a One Group Pretest-Posttest design in which all respondents received an academic-based supervision intervention. The number of respondents or samples in this study was 31 health workers, consisting of nurses and midwives at the Klabang Health Center.</p> <p>The study's results were processed using univariate and bivariate data analysis, as well as the Wilcoxon Analysis test to test the research hypothesis. The p-value obtained from the Wilcoxon Analysis test was 0.002. After academic-based supervision, health workers' compliance with hand washing reached 100%.</p>

No.	Researcher Name and Year	Journal Name	Research Title	Summary of Research Results
13	(Bifarin & Stonehouse, 2017)	British Journal of Nursing Vol. 26 (6) The year 2017 Scopus Q3	Clinical supervision: An essential part of every nurse's practice	The intervention method used in this study was clinical supervision, which is a practice where a nurse receives support and guidance in a safe environment to improve the quality of care. This study involved an intervention group consisting of nurses who received clinical supervision. The number of respondents or research samples involved should have been explicitly mentioned in the summary provided. The researcher used a qualitative analysis method to determine the importance of clinical supervision in developing nurse professionalism and improving patient care.
14	(Masna et al., 2017)	Mirai Management Journal Vol. 2 (2) Year 2017	Analysis of the Influence of Room Head Supervision, Workload, and Motivation on Nurse Performance in Nursing Care Documentation at Bhayangkara Hospital Makassar	This study uses a quantitative method with a cross-sectional study design. The number of respondents was 49 nurses. The sample was selected using a purposive sampling technique. The results were analyzed using multiple linear regression analysis. The p-value for the workload variable is 0.110. Although the workload of nurses at Bhayangkara Makassar Hospital is perceived to be quite high, in this study, no significant effect was found on nurses' performance in documenting nursing care.
15	(Farrington, 1995)	British Journal of Nursing Vol. 4 (15) The year 1995 Scopus Q3	Models of Clinical Supervision	This study discusses various models of clinical supervision in mental health nursing practice, with an emphasis on integrative approaches. As competence and confidence increased, supervisors developed personalized models of clinical supervision as part of their reflective practice. This research shows that clinical supervision significantly enhances supervisees' self-understanding, self-awareness, and emotional growth and develops their professional skills.
16	(Fatikhah, 2019)	Surya Muda Journal Vol. 1(1)	The Effect of Reflective Model	The intervention method used in this study was the reflective

No.	Researcher Name and Year	Journal Name	Research Title	Summary of Research Results
		Year 2019	Room Head Supervision on Job Satisfaction of Nurses at Tugurejo Hospital, Central Java Province	supervision model. The number of respondents or research samples was 68 nurses, which were divided into intervention groups (n = 34) and control groups (n = 34). The results of the study were processed using a paired t-test. The p-value in this study was <0.001. The results showed an increase in nurse job satisfaction after the reflective model supervision intervention.
17	(Ramadhon, 2019)	Scientia Journal Vol. 8 (1) The year 2019	The Relationship between Workload and Supervision with the Performance of Executive Nurses in the Emergency Department (IGD) of the H. Abdul Manap Regional General Hospital, Jambi City, in 2017	No intervention was conducted in this study. The number of respondents was 24 executive nurses. Data analysis techniques were performed with the Chi-Square Test. The p-value for the relationship between nurse supervision and executive nurse performance was 0.019. Most of the nurses' performance was good, but a small proportion had poor performance.
18	(Ningsih et al., 2020)	Indonesian Health Promotion Publication Media Vol. 3 (3) The year 2020	The Effect of Supervision and Transformational Leadership Style on Nurses' Performance in Hand Hygiene Compliance and Fall Risk Prevention at RSU GMIBM Monompia Kotamobagu	The intervention method used was transformational leadership training for hospital heads of rooms. The intervention group involved 112 executive nurses and two heads of rooms as samples. The study's results were processed using a statistical analysis method, namely a paired sample t-test. The p-value for the supervision variable was 0.000, for the transformational leadership style was 0.043, and for nurse performance was 0.011. Nurses' performance significantly improved after the intervention, with the mean value increasing from 80.69 to 90.75.
19	(Nurhidayati et al., 2023)	Open Access Jakarta Journal of Health Sciences Vol. 2 (10) Year 2023	Supervision of the Head of the Room and Job Satisfaction Can Improve the Performance of Implementing Nurses in Hospitals	This study involved an intervention group of executive nurses in the Inpatient Room of Jati Padang Regional General Hospital. The number of research respondents was 35 people. The results of the study were analyzed using multiple linear regression methods. The P-value for the relationship between

No.	Researcher Name and Year	Journal Name	Research Title	Summary of Research Results
20	(Anita, 2021)	Scientific Journal of Manado Nurses (Juiperdo) Vol. 9(02) Year 2021	IMPROVED KNOWLEDGE AND REPORTING OF PATIENT SAFETY INCIDENTS BY NURSE EXECUTIVES AFTER ACADEMIC MODEL SUPERVISION IN X HOSPITAL, CIREBON CITY	<p>supervision of the head of the room and job satisfaction on the performance of executive nurses was 0.000, which means $P < 0.05$. The performance of executive nurses tends to be poor, with only 17.1% of respondents showing good performance in nursing care documentation.</p> <p>The intervention method used is an academic model supervision conducted by supervisors to executive nurses. The intervention group in this study were 77 executive nurses. The study's results were processed using Wilcoxon and chi-square test analysis. The p-value was $p > 0.05$, indicating no significant relationship between gender, age, and length of service and the implementation of Patient Safety Goals. Nurses' knowledge of Patient Safety Incidents increased by 52.2% in the group of nurses with more than three years of work experience. Increased reporting of Patient Safety Incidents occurred after being given academic model supervision.</p>
21	(McConkey et al., 2023)	International Journal of Urological Nursing Vol. 17 (1) Year 2022 Scopus Q3	Developing a Culture of Nursing Research Through Clinical-academic Partnership	<p>The intervention method used was a clinical-academic collaboration approach to develop a nursing research culture. The results were analyzed using descriptive analysis and reflection on experience. The results highlighted the importance of partnerships between clinical practitioners and academics in developing a nursing research culture. They emphasized the importance of actively engaging in published literature as evidence-based practitioners, as well as conducting nurse-led research to improve patient care. As such, this research supports informed decision-making and changes in practice/policy.</p>
22	(Pandie, 2019)	Thesis of Sint Carolus College of Health Sciences	The Effect of Implementation of Academic Model	<p>The intervention method used was a pre-post-test control group for the Team Leader and</p>

No.	Researcher Name and Year	Journal Name	Research Title	Summary of Research Results
		The year 2019	Clinical Supervision by Team Leaders on the Implementation of Patient Safety Goals by Nurse Executives at X Banten Hospital	Managing Nurse. There were 90 respondents, 68 of whom entered the intervention group and 22 of whom entered the control group. The data analysis used the Wilcoxon t-test, Mann-Whitney test, and Ordinal Logistic Regression. The results showed that identification increased (p=0.000), and effective communication with SBAR and TbaK increased (p=0.000). Academic Model clinical supervision intervention, age, and length of service together influence <i>patient safety</i> .

RESULT AND DISCUSSION

The Importance of Supervision on Nurse Performance

The role of supervision on nurse performance is vital in improving the quality of health services in various health service agencies. Research results by (Sulistiawati et al., 2022) showed that clinical supervision with an academic model can have a positive impact on the performance of executive nurses in hospitals. This is in line with the findings of (Ramadhon, 2019), who found a relationship between workload and supervision with the performance of executive nurses in the emergency department installation. In addition, (Ningsih et al., 2020) also highlighted the importance of supervision and transformational leadership style on nurse performance in aspects of hand hygiene compliance and fall risk prevention in hospitals. Another study (Nurhidayati et al., 2023) confirmed that supervision of the head of the room and job satisfaction can improve the performance of executive nurses in hospitals. Not only that, factors such as nursing supervision, incentives, and work motivation also play a role in increasing nurses' job satisfaction, as shown by (Jariah & Agustini, 2022). Supervision can also have an impact on preventive behaviour, as observed in a study (Wagiono & Handiyani, 2022). (Wagiono & Handiyani, 2019) who found a correlation between nursing supervision and low back pain prevention behaviour among nursing staff in a hospital.

Therefore, supervision affects not only nurses' performance but also job satisfaction, preventive behaviour, and the overall quality of health care. Therefore, medical institutions need to pay sufficient attention to the implementation of adequate supervision to support nurses' optimal performance.

Benefits of Academic Model Supervision

Academic model supervision has significant benefits in improving nurse performance in various healthcare institutions. Research shows that clinical supervision that is carried out continuously and appropriately can improve the quality of nursing care along with nurse competence (Ningsih et al., 2020). In addition, nursing supervision can also improve the performance of implementing nurses by directing them to provide quality nursing care (Nurhidayati et al., 2023). Factors such as incentives, work motivation, and nursing supervision also play an essential role in increasing nurses' job satisfaction, which in turn can affect their

performance. (Jariah & Agustini, 2022). Another study showed a relationship between workload and supervision in the performance of executive nurses in a hospital (Ramadhon, 2019). Academic model supervision can also contribute to developing a culture of nursing research through partnerships between academics and health practitioners (McConkey et al., 2023). However, a study showed that there was no difference in the performance of executive nurses after academic model supervision between the intervention group and the control group, and there was no relationship between education level, tenure, motivation, and perception with the performance of executive nurses (Sulistiawati et al., 2022).

In the context of nurses' job satisfaction, the reflective Model of supervision of the head of the room can also affect nurses' job satisfaction in the Hospital (Fatikhah, 2019). Meanwhile, the clinical supervision model and academic supervision model have a significant impact on nursing care in community health centres (Abdillah & Basri, 2021). In general, clinical supervision is an integral part of every nurse's practice and can be adapted according to local needs (Bifarin & Stonehouse, 2017). Various models of supervision have been developed, including integrative approaches to clinical supervision in mental health practice.

The academic Model supervision model plays an important role in improving performance, job satisfaction, and the quality of nursing care in various health institutions. A holistic and sustainable approach to implementing supervision is needed to ensure optimal benefits for nurses and patients.

Nurse Satisfaction Indicator

Nursing satisfaction is an essential component of healthcare as it directly affects the quality of care provided to patients. Various factors have been identified in research that contribute to nurse satisfaction. Supervision plays a vital role in influencing nurse satisfaction (Fatikhah, 2019); (Jariah & Agustini, 2022); (Nurhidayati et al., 2023); (Ramadhon, 2019); (Sulistiawati et al., 2022). Adequate supervision, whether through clinical models, reflective models, or nurse leader supervision, has been shown to impact nurses' job satisfaction positively. (Fatikhah, 2019). In addition, clinical supervision has been emphasized as an essential element of nursing practice, contributing to increased job satisfaction among nurses (Bifarin & Stonehouse, 2017).

Other studies have shown that supervision, especially when combined with a transformational leadership style, can improve nurses' performance in areas such as adherence to hand hygiene protocols and fall prevention measures. (Ningsih et al., 2020). Furthermore, clinical supervision has been associated with improved nursing performance, showing a positive relationship between supervision and the quality of nursing services provided. (Sulistiawati et al., 2022). In the context of nurse satisfaction, factors such as workload and supervisory support are critical (Kim & Lee, 2023); (Ramadhon, 2019). High workload and inadequate supervision have been linked to reduced nurse satisfaction and performance. (Ramadhon, 2019). In contrast, supportive supervision has been identified as a predictor of nurses' intention to remain in their current position, underscoring the importance of a positive work environment and supervisory support in improving nurse satisfaction and retention (Kim & Lee, 2023).

In conclusion, indicators of nurse satisfaction cover a range of factors, including adequate supervision, workload management, leadership style, and a supportive work environment. By

addressing these indicators, healthcare institutions can encourage nurse satisfaction, leading to improved patient care outcomes.

The Effect of Academic Model Supervision on Nurse Workload

Supervision in nursing plays a vital role in improving nurses' performance and job satisfaction. The academic Model of supervision has been shown to have a positive impact on nurses' workload. Academic model supervision facilitates nurses in solving problems, exchanging ideas, maintaining consistency in applying standards, and improving performance. (Sulistiawati et al., 2022). This form of supervision also helps in providing a platform for nurses to practice and improve their skills, which ultimately leads to increased job satisfaction and performance. (Sulistiawati et al., 2022). In addition, research shows that there is a significant relationship between workload, supervision, and nurse performance (Ramadhon, 2019). Adequate supervision can reduce the impact of workload on nurses and improve their overall performance. In addition, studies highlighted the importance of nursing supervision, incentives, and motivation in influencing job satisfaction among nurses (Jariah & Agustini, 2022). Understanding the dominant factors that influence job satisfaction is essential for hospitals to create a conducive work environment for their nursing staff.

Furthermore, the research emphasizes the moderate role of supervision and transformational leadership style in improving nurse performance (Ningsih et al., 2020). This suggests that the quality of supervision provided to nurses, along with effective leadership, can significantly influence their performance outcomes. In addition, research has been done underscoring the positive correlation between ward chief supervision, job satisfaction, and nurse performance (Nurhidayati et al., 2023). This highlights the importance of supportive supervisory practices in healthcare settings.

This is also in line with other research that states that when the academic Model of supervision for nurses working in hospitals is effectively implemented, it can have several benefits in managing nurses' workload. Appropriate supervision can assist in efficiently distributing workload among nursing staff, ensuring that tasks are allocated based on individual abilities and resources. (Dhaini et al., 2022).. Supervision can also play an essential role in providing support and guidance to nurses, helping them navigate challenging situations and manage their workload effectively. (Lv et al., 2022). In addition, supervision can strengthen bonds within teams, especially during periods of high workload, fostering a collaborative and supportive work environment (Van den Oetelaar et al., 2021).

Effective supervision can mediate the impact of workload on nurses' job satisfaction, emotional exhaustion, and burnout. (Maghsoud et al., 2022). By providing structured support and guidance, supervision can help nurses navigate their workload more effectively, leading to increased job satisfaction and reduced emotional exhaustion (Putra et al., 2021). Supervision can also contribute to improving nurses' caring behaviours and overall job satisfaction, ultimately improving the quality of patient care (Juanamasta et al., 2023). In addition, supervision can facilitate continuous support mechanisms and critical reflection and reduce burnout among nurses, leading to improved quality and quantity of feedback and improved well-being (Benny et al., 2023). Appropriate supervision can also assist in predicting workload activities, analyzing workload influences, and reducing the impact of high workload on nurses' well-being and performance. (Dempsey et al., 2023). (Sharif Nia et al., 2021). In addition,

supervision can improve nurses' self-awareness, self-efficacy, and knowledge, contributing to improved patient outcomes and quality of care (Tulleners et al., 2022).

In conclusion, the academic Model of supervision has an essential influence on nurses' workload, job satisfaction, and performance. By implementing effective supervision strategies, hospitals can create a conducive work environment that promotes the well-being and performance of their nursing staff. Healthcare institutions must prioritize supervisory practices that support and empower nurses in providing high-quality patient care.

The Effect of Academic Model Supervision on Perawa Stress

The impact of academic model supervision on nurses' stress and performance is an essential area of study in the healthcare field. Research has shown that factors such as clinical supervision, leadership style, workload, and job satisfaction can significantly affect nurses' performance and stress levels. (Jariah & Agustini, 2022); (Ningsih et al., 2020); (Nurhidayati et al., 2023); (Ramadhon, 2019); (Sulistiawati et al., 2022). Clinical supervision, mainly when applied to an academic model, has been found to have a positive impact on nurse performance. (Abdillah & Basri, 2021). Studies have highlighted the relationship between workload, supervision, and nurse performance, underscoring the importance of adequate supervision in reducing stress and improving performance. (Ramadhon, 2019). In addition, the quality of supervision, including support from supervisors, has been associated with job satisfaction and performance among nurses (Nurhidayati et al., 2023).

Different types of supervision, such as clinical or academic model supervision, can influence various aspects of nursing care, including adherence to protocols such as hand hygiene and fall prevention (Ningsih et al., 2020). Academic model supervision has been associated with improved practice and nursing care outcomes (Fatikhah, 2019). It is essential to consider the different effects that different supervision models can have on nurse satisfaction and performance.

This is in line with other studies which state that the benefits of academic model supervision on nurses' stress are significant and can have a positive impact on nurses' well-being and performance. Adequate supervision can help reduce stress levels among nurses by providing support, guidance, and a structured framework for managing workloads and challenges (Saab et al., 2021). Supervision can also contribute to improving nurses' resilience, coping mechanisms, and self-regulation, which is essential in reducing stress and burnout (Saab et al., 2021). In addition, supervision can facilitate the development of problem-solving skills, stress management strategies, and emotional support, leading to a reduction in work-related stress among nurses (Saab et al., 2021). Moreover, academic model supervision can play an essential role in reducing burnout and work-related stress among nurses by providing a platform for reflection, feedback, and support (Saab et al., 2021).

Supervision can also improve nurses' self-awareness, self-efficacy, and emotional well-being, leading to improved stress management and job satisfaction (Mcdermott et al., 2020).. In addition, supervision can promote a positive work environment, teamwork, and communication, which are important in reducing stress and improving job performance (Tulleners et al., 2022). Adequate supervision can also help identify stressors, address them proactively, and foster a supportive and collaborative work culture. (Achempim-Ansong et al., 2021).

In conclusion, the relationship between supervision models, nurse performance, and stress is mixed. Academic model supervision, when effectively implemented, can positively influence nurses' performance and job satisfaction, ultimately reducing stress levels. Further research in this area is essential to deepen our understanding of how different models of supervision impact nurses in various healthcare settings.

CONCLUSION

Academic model supervision has a significant influence on the workload and stress of nurses in hospitals. Appropriate supervision can assist nurses in improving skills and knowledge, improving services provided, developing professionalism, increasing independence, improving nursing care, reducing workload, improving nurse performance, providing good emotional support and continuous learning, and reducing the level of stress experienced by nurses. This can ultimately improve the quality of health services provided to patients, as well as increase nurses' overall job satisfaction. Thus, effective implementation of the academic Model of supervision can have a positive impact on nurses, patients, and the health system as a whole.

REFERENCES

- Abdillah, H., & Basri, B. (2021). The Effect of Clinical Model Supervision and Academic Model Supervision on Nursing Care at the Community Health Center of Sukabumi Regency. *KnE Life Sciences*, 594–612.
- Achempim-Ansong, G., Kwashie, A. A., & Ofei, A. A. (2021). Exploring the benefits and challenges of administrative clinical supervision in nursing and midwifery. *Journal of Nursing Education and Practice*, 12(1), 14.
- Adriani, P., Triana, N. Y., & Prabandari, R. (2022). The effect of workload on work stress of nurses in hospital. *JHeS (Journal of Health Studies)*, 6(2), 50–59.
- Almenyan, A. A., Albuduh, A., & Al-Abbas, F. (2021). Effect of nursing workload in intensive care units. *Cureus*, 13(1).
- Anita, A. (2021). Improved Knowledge And Reporting Of Patient Safety Incidents By Nurse Executives After Academic Model Supervision In X Hospital, Cirebon City. *Jurnal Ilmiah Perawat Manado (Juiperdo)*, 9(02), 296–317.
- Atmaja, A. D., Hartini, M. I., & Dwiantoro, L. (2018). Pengaruh Supervisi Klinik Model Akademik Terhadap Kemampuan Perawat Dalam Menerapkan Patient Centered Care (PCC) Di Rumah Sakit. *Jurnal Keperawatan Pemikiran Ilmiah*, 4(6), 41–54.
- Banda, Z., Simbota, M., & Mula, C. (2022). Nurses' perceptions on the effects of high nursing workload on patient care in an intensive care unit of a referral hospital in Malawi: a qualitative study. *BMC Nursing*, 21(1), 136.
- Benny, J., Porter, J. E., & Joseph, B. (2023). A systematic review of preceptor's experience in supervising undergraduate nursing students: Lessons learned for mental health nursing. *Nursing Open*, 10(4), 2003–2014.
- Bifarin, O., & Stonehouse, D. (2017). Clinical supervision: an important part of every nurse's practice. *British Journal of Nursing*, 26(6), 331–335.
- Budiyanto, B., Rattu, A. J. M., & Umboh, J. M. L. (2019). Faktor-Faktor Yang Berhubungan Dengan Stres Kerja Perawat Pelaksana Di Ruang Rawat Inap Rumah Sakit Umum Bethesda Gmim Tomohon. *Kemas*, 8(3).
- Castro-Sánchez, E., Russell, A.-M., Dolman, L., & Wells, M. (2021). What place does nurse-led research have in the COVID-19 pandemic? *International Nursing Review*, 68(2),

- 214–218.
- Dempsey, L., Gaffney, L., Bracken, S., Tully, A., Corcoran, O., McDonnell-Naughton, M., Sweeney, L., & McDonnell, D. (2023). Experiences of undergraduate nursing students who worked clinically during the COVID-19 pandemic. *Nursing Open*, *10*(1), 142–155.
- Dewi, N. F., & Santoso, R. K. (2020). Effect of Nursing Satisfaction Level on Service Quality at Inpatient Installation in X Hospital. *3rd International Conference on Vocational Higher Education (ICVHE 2018)*, 294–298.
- Dhaini, S. R., Abed Al Ahad, M., Simon, M., Ausserhofer, D., Abu-Saad Huijjer, H., & Elbejjani, M. (2022). Repeated assessments and predictors of nurses' shift-specific perceived workload. *Nursing Forum*, *57*(6), 1026–1033.
- Dwinijanti, L., Adhikara, M. F. A., & Kusumapradja, R. (2020). Job satisfaction and turnover intention among public sector nurses: Is workload and burnout the issue? *JEMA: Jurnal Ilmiah Bidang Akuntansi Dan Manajemen*, *17*(1), 67–77.
- Fabrellas, N., Carol, M., Palacio, E., Aban, M., Lanzillotti, T., Nicolao, G., Chiappa, M. T., Esnault, V., Graf-Dirmeier, S., & Helder, J. (2020). Nursing care of patients with cirrhosis: the LiverHope nursing project. *Hepatology*, *71*(3), 1106–1116.
- Farrington, A. (1995). Models of clinical supervision. *British Journal of Nursing*, *4*(15), 876–878.
- Fatikhah, F. (2019). Pengaruh Supervisi Kepala Ruang Model Reflektif Terhadap Kepuasan Kerja Perawat Di Rsud Tugurejo Provinsi Jawa Tengah. *Jurnal Surya Muda*, *1*(1), 21–32.
- İzci, S. M., & Çetinkaya, B. (2022). The effect of work stress, workload and social support on nurses' self-perceptions of parenting roles during the Covid-19 pandemic. *Journal of Nursing Management*, *30*(8), 4322–4329.
- Jariah, A., & Agustini, T. (2022). Pengaruh Supervisi Keperawatan, Insentif dan Motivasi Kerja terhadap Kepuasan Kerja pada Perawat. *Window of Nursing Journal*, 49–56.
- Juanamasta, I. G., Aunguroch, Y., Fisher, M. L., Gunawan, J., & Iblasi, A. S. (2023). An integrative review of Indonesia's quality of care. *Int J Publ Health Sci*, *12*(2), 606–613.
- Kim, Y. B., & Lee, S. H. (2023). The Nursing Work Environment, Supervisory Support, Nurse Characteristics, and Burnout as Predictors of Intent to Stay among Hospital Nurses in the Republic of Korea: A Path Analysis. *Healthcare (Switzerland)*, *11*(11), 1653. <https://doi.org/10.3390/healthcare11111653>
- Ko, Y., Yu, S., & Jeong, S. H. (2020). Effects of nursing power and organizational trust on nurse's responsiveness and orientation to patient needs. *Nursing Open*, *7*(6), 1807–1814.
- Kokoroko, E., & Sanda, M. A. (2019). Effect of workload on job stress of Ghanaian OPD nurses: The role of coworker support. *Safety and Health at Work*, *10*(3), 341–346.
- Kudo, Y., & Toyoda, T. (2022). Facilitating the acceptance of employment of older registered nurses among Japanese female registered nurses younger than 65 years old. *Journal of Rural Medicine*, *17*(3), 108–117.
- Lee, E., & Kim, J. (2020). Nursing stress factors affecting turnover intention among hospital nurses. *International Journal of Nursing Practice*, *26*(6), e12819.
- Low, Y. M., Sambasivan, M., & Ho, J. A. (2021). Impact of abusive supervision on counterproductive work behaviors of nurses. *Asia Pacific Journal of Human Resources*, *59*(2), 250–278.
- Lv, Q., Zhang, Y., Li, Y., & Yu, Y. (2022). Research on the Construction of a Nursing Education Management Model Based on a Small Data-Driven Model and Its Application. *Computational Intelligence and Neuroscience*, *2022*(1), 3099794.
- Maghsoud, F., Rezaei, M., Asgarian, F. S., & Rassouli, M. (2022). Workload and quality of nursing care: the mediating role of implicit rationing of nursing care, job satisfaction and emotional exhaustion by using structural equations modeling approach. *BMC Nursing*,

- 21(1), 273. <https://doi.org/10.1186/s12912-022-01055-1>
- Mahmoud, H., Zakaria, A., & Abo Habieb, E. (2021). The Relationship between Emotional labor, Workplace Aggression and Organizational Role Stress among Nursing Staff. *Mansoura Nursing Journal*, 8(3), 91–107.
- Masna, M., Abdullah, R., & Tamsah, H. (2017). Analisis Pengaruh Supervisi Kepala Ruangan, Beban Kerja, Dan Motivasi Terhadap Kinerja Perawat Dalam Pendokumentasian Asuhan Keperawatan Di Rumah Sakit Bhayangkara Makassar. *Jurnal Mirai Management*, 2(2), 369–385.
- Matlhaba, K. L. (2023). The perceived effects of generational diversity on supervision of new professional nurses in public hospitals. *Health SA Gesondheid*, 28(1). <https://doi.org/10.4102/hsag.v28i0.2227>
- McConkey, R. W., Kelly, T., Dalton, R., Rooney, G., Healy, M., Murphy, L., & Dowling, M. (2023). Developing a culture of nursing research through clinical-academic partnership. *International Journal of Urological Nursing*, 17(1), 78–83.
- Mcdermott, R. C., Fruh, S. M., Williams, S., Hauff, C., Graves, R. J., Melnyk, B. M., & Hall, H. R. (2020). Nursing students' resilience, depression, well-being, and academic distress: Testing a moderated mediation model. *Journal of Advanced Nursing*, 76(12), 3385–3397.
- McVey, C. (2023). Telenursing: a concept analysis. *CIN: Computers, Informatics, Nursing*, 41(5), 275–280.
- Miller, M., & Hemberg, J. (2023). Nurse leaders' perceptions of workload and task distribution in public healthcare: A qualitative explorative study. *Journal of Clinical Nursing*, 32(13–14), 3557–3567.
- Mohamed, F. R., & Mohamed Ahmed, H. (2019). Clinical supervision factors as perceived by the nursing staff. *J Nurs Educ Pract*, 9(6), 67.
- Nair, R. (2021). Occupational Stress and Its Impact on Work and Work-Life Balance among Nurses in a Large Private Hospital in South India. *Indian Journal of Forensic Medicine & Toxicology*, 15(2).
- Ningsih, S. R., Novita, R. V. T., & Bandur, A. (2020). Pengaruh Supervisi dan Gaya Kepemimpinan Transformasional terhadap Kinerja Perawat dalam Kepatuhan Hand Hygiene dan Pencegahan Resiko Jatuh di RSUD GMIBM Monompia Kotamobagu. *Media Publikasi Promosi Kesehatan Indonesia (MPPKI)*, 3(3), 236–243.
- Nurhidayati, F., Daely, W., & Purnama, A. (2023). Supervisi Kepala Ruangan dan Kepuasan Kerja dapat Meningkatkan Kinerja Perawat Pelaksana di Rumah Sakit. *Open Access Jakarta Journal of Health Sciences*, 2(10), 923–929. <https://doi.org/10.53801/oajjhs.v2i10.192>
- Pandie, P. R. (2019). *Pengaruh Penerapan Supervisi Klinik Model Akademik oleh Ketua Tim terhadap Implementasi Sasaran Patient Safety oleh Perawat Pelaksana di Rumah Sakit X Banten*. STIK Sint Carolus Jakarta.
- Pinto, C. M. C. B., & Carvalho, A. L. R. F. de. (2021). Impact of clinical supervision on job satisfaction and emotional competence of nurses. *Revista Brasileira de Enfermagem*, 74, e20210125.
- Pratiwi, I. H., Khotimah, H., & Supriyadi, B. (2020). Supervisi Berbasis Akamedik kepada Petugas Kesehatan dalam Kepatuhan Mencuci Tangan. *Coping: Community of Publishing in Nursing*, 8(1), 17–24.
- Putra, K. R., Andayani, T., & Ningrum, E. H. (2021). Job satisfaction and caring behavior among nurses in a military hospital: A cross-sectional study. *Journal of Public Health Research*, 10(2), jphr-2021.
- Ramadhon, Y. A. (2019). Hubungan Beban Kerja dan Supervisi dengan Kinerja Perawat Pelaksana di Instalasi Gawat Darurat (IGD) Rumah Sakit Umum Daerah H. Abdul

- Manap Kota Jambi Tahun 2017. *Scientia Journal*, 8(1), 156–159.
- Robat, R. M., Fauzi, M. F. M., Saruan, N. A. M., Yusoff, H. M., & Harith, A. A. (2021). Why so stressed? A comparative study on stressors and stress between hospital and non-hospital nurses. *BMC Nursing*, 20.
- Saab, M. M., Kilty, C., Meehan, E., Goodwin, J., Connaire, S., Buckley, C., Walsh, A., O'Mahony, J., McCarthy, V. J. C., & Horgan, A. (2021). Peer group clinical supervision: Qualitative perspectives from nurse supervisees, managers, and supervisors. *Collegian*, 28(4), 359–368.
- Safan, S. M., Allah, A. R. G., & Nassar, R. A. A. (2020). Clinical supervision coaching program for head nurses and its relation to their professional identity. *Clin. Nurs. Stud*, 8(1), 41–52.
- Santoso, B., Sukma, F., Fahrizal, I., Munir, S., & Narmaditya, B. S. (2022). Determinants of Hospital Nurse Burnout: The Moderating Role of Supervision. *Asian Journal for Public Opinion Research*, 10(4), 293–315.
- Sharif Nia, H., Arslan, G., Naghavi, N., Sivarajan Froelicher, E., Kaveh, O., Pahlevan Sharif, S., & Rahmatpour, P. (2021). A model of nurses' intention to care of patients with COVID-19: Mediating roles of job satisfaction and organisational commitment. *Journal of Clinical Nursing*, 30(11–12), 1684–1693. <https://doi.org/10.1111/jocn.15723>
- Singh, C., Cross, W., Munro, I., & Jackson, D. (2020). Occupational stress facing nurse academics—A mixed-methods systematic review. *Journal of Clinical Nursing*, 29(5–6), 720–735.
- Sulistiawati, I., Setiawan, A., Rudhiati, F., Inayah, I., & Murtiningsih, M. (2022). Supervisi Klinik Model Akademik terhadap Kinerja Perawat Pelaksana. *Jurnal Keperawatan Silampari*, 6(1), 733–745.
- Supratman, S., & Sudaryanto, A. (2008). Model-model supervisi keperawatan klinik. *Jurnal Berita Ilmu Keperawatan*, 1(4), 193–196.
- Trigantara, R., Anggorowati, A., & Santoso, A. (2019). Pengawasan Klinis Model Proctor untuk Meningkatkan Kemampuan dalam Melakukan Asuhan Keperawatan. *Fundamental and Management Nursing Journal*, 2(2).
- Tulleners, T., Taylor, M., & Campbell, C. (2022). Peer group clinical supervision for community health nurses: Perspectives from an interpretive hermeneutic study. *Journal of Nursing Management*, 30(3), 684–693.
- Van den Oetelaar, W. F. J. M., Roelen, C. A. M., Grolman, W., Stellato, R. K., & van Rhenen, W. (2021). Exploring the relation between modelled and perceived workload of nurses and related job demands, job resources and personal resources; a longitudinal study. *PLoS One*, 16(2), e0246658.
- Wagiono, A., & Handiyani, H. (2019). Correlation between nursing supervision and low back pain preventive behavior among nursing staff in hospital. *Enfermería Clínica*, 29, 5–9.
- Yestiana, Y., Kurniati, T., & Hidayat, A. A. A. (2019). Predictors of burnout in nurses working in inpatient rooms at a public hospital in Indonesia. *Pan African Medical Journal*, 33(1).
- Younge, L., Sufi, H., & Dibley, L. (2020). Regular clinical supervision to enhance wellbeing in inflammatory bowel disease specialist nurses: a small pilot study. *Gastrointestinal Nursing*, 18(3), 36–42.
- Zare, S., Kazemi, R., Izadi, A., & Smith, A. (2021). Beyond the outbreak of COVID-19: factors affecting burnout in nurses in Iran. *Annals of Global Health*, 87(1).