African Journal of Health, Nursing and Midwifery
ISSN: 2689-9418
Volume 9, Issue 2, 2026 (pp. 61-75)
www.abjournals.org

CRITICAL THINKING, SELF-CONFIDENCE, AND CLINICAL DECISION-MAKING IN MANAGING PATIENT DETERIORATION EVENTS AMONG MEDICAL SURGICAL STAFF NURSES IN SELECTED HOSPITALS IN MANILA

Mark John S. Catalo

Institute of Health Sciences and Nursing, Far Eastern University, Manila

Email: mcatalo@feu.edu.ph

Cite this article:

Mark John S. Catalo (2026), Critical Thinking, Self-Confidence, and Clinical Decision-Making in Managing Patient Deterioration Events Among Medical Surgical Staff Nurses in Selected Hospitals in Manila. African Journal of Health, Nursing and Midwifery 9(2), 61-75. DOI: 10.52589/AJHNM-EUE8KF9P

Manuscript History

Received: 5 Mar 2026

Accepted: 8 Apr 2026

Published: 1 May 2026

Copyright © 2026 The Author(s). This is an Open Access article distributed under the terms of Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International (CC BY-NC-ND 4.0), which permits anyone to share, use, reproduce and redistribute in any medium, provided the original author and source are credited.

ABSTRACT: *Purpose: This study aimed to determine which nurse-related factors, specifically critical thinking, self-confidence, and selected demographic characteristics, significantly predict the clinical decision-making of medical-surgical nurses when managing patient deterioration. Background: Patient deterioration in medical-surgical units poses a serious challenge to patient safety, often requiring prompt and sound clinical decision-making from nurses. While critical thinking and self-confidence are believed to influence nurses' decisions, few empirical studies have examined their predictive role, particularly in the Philippine hospital context. Method: A predictive correlational research design was employed. Data were collected from 290 medical-surgical staff nurses working in selected level 2 and level 3 hospitals across Manila. Standardized instruments were used to measure critical thinking (CTSAS), self-confidence (Hicks Scale), and clinical decision-making (CDMNS). Multiple linear regression (MLR) was used to identify significant predictors of clinical decision-making. Results: The ten-variable full model significantly predicted clinical decision-making, $F(10, 273) = 47.6$, $p < .001$, with an adjusted R^2 of 0.677. A four-factor reduced model, consisting of critical thinking, self-confidence, prior rotation in non-medical-surgical units, and previous rapid response team (RRT) training, retained similar explanatory power (adjusted $R^2 = 0.676$). Specifically, clinical decision-making scores increased with higher critical thinking ($b = 0.280$, $p < .001$), self-confidence ($b = 1.124$, $p < .001$), non-MS unit experience ($b = 4.502$, $p = .005$), and prior RRT training ($b = 6.196$, $p < .001$). Conclusion: The study confirms that critical thinking and self-confidence are significant predictors of nurses' clinical decision-making during patient deterioration events. Contextual factors, such as prior rotations and RRT-related training, also enhance decision-making capacity. These findings emphasize the need for structured education and training programs that cultivate cognitive competence and experiential preparedness among medical-surgical nurses. Implications: Nursing practice should incorporate simulation-based learning, mentorship, and scenario-based training to enhance nurses' critical thinking and confidence. Nurse educators and hospital administrators are encouraged to provide diverse clinical exposure and continuous professional development to strengthen decision-making skills vital for early recognition and management of patient's deterioration.*

KEYWORDS: Clinical decision-making, critical thinking, medical-surgical nursing, patient deterioration, rapid response training, self-confidence, simulation-based education.

Article DOI: 10.52589/AJHNM-EUE8KF9P
DOI URL: https://doi.org/10.52589/AJHNM-EUE8KF9P

African Journal of Health, Nursing and Midwifery
ISSN: 2689-9418
Volume 9, Issue 1, 2026 (pp. 61-75)

www.abjournals.org

INTRODUCTION

Patient deterioration remains a critical challenge in hospital settings, particularly in medical-surgical units where patients may experience sudden and unexpected physiological decline. Early recognition and timely intervention are essential in preventing adverse outcomes such as cardiac arrest, intensive care unit admission, or mortality. However, failure to recognize subtle changes in patient conditions may lead to delayed responses and worsening clinical outcomes. Patient deterioration has been described as a phenomenon resulting from the failure to recognize or appropriately respond to changes in a patient's clinical status. Nurses play a vital role in monitoring patient conditions because they maintain the closest and most continuous contact with patients in hospital settings. Through regular assessment of vital signs, mental status, and other physiological indicators, nurses are often the first healthcare professionals to detect early signs of deterioration. In medical-surgical units, where monitoring equipment may be limited and nurse-to-patient ratios are higher compared with intensive care settings, the ability of nurses to recognize deterioration and initiate appropriate actions becomes even more critical.

Critical thinking is widely recognized as an essential competency in nursing practice. It enables nurses to assess patient conditions, interpret clinical data, and make sound judgments regarding appropriate interventions. According to Martin (2002), critical thinking is a cognitive process used by nurses to make clinical decisions, and the quality of these decisions often improves with increasing clinical expertise. Nurses who demonstrate strong critical thinking skills are more capable of analysing patient information, identifying potential complications, and initiating timely interventions to prevent further deterioration.

Self-confidence is another important factor influencing nurses' performance during patient deterioration events. Self-confidence refers to an individual's belief in their ability to perform tasks successfully. In nursing practice, self-confident nurses are more likely to speak up, advocate for patients, and initiate appropriate clinical actions when necessary. Education, training, clinical experience, and organizational support all contribute to the development of self-confidence among nurses. Studies have shown that self-confidence is positively associated with critical thinking and overall clinical competence (Tajvidi & Hanjani, 2019).

Clinical decision-making serves as the process through which nurses apply their knowledge, reasoning, and clinical judgment to determine appropriate patient care interventions. This process involves synthesizing patient data, evaluating possible explanations for clinical changes, and selecting the most appropriate course of action. Benner (1984) emphasized that clinical decision-making evolves with experience as nurses progress from novice to expert levels of practice; this developmental progression remains evident in recent studies highlighting experience as a key predictor of clinical judgment and professional competence (Lamichhane, 2025; Mendívil et al., 2025).

In the Philippines, hospitals particularly those in the National Capital Region face additional challenges related to patient deterioration management. High patient loads, limited resources, and overcrowding can make continuous monitoring and early detection of deterioration difficult. While larger hospitals may have better monitoring systems and structured protocols, smaller facilities may experience staffing shortages and limited access to advanced equipment. These conditions highlight the need for nurses to rely heavily on their clinical judgment and decision-making skills when managing patient deterioration events. Despite the recognized

Article DOI: 10.52589/AJHNM-EUE8KF9P
DOI URL: https://doi.org/10.52589/AJHNM-EUE8KF9P

importance of critical thinking, self-confidence, and clinical decision-making in nursing practice, limited research has explored how these factors predict the clinical decision-making of medical-surgical nurses managing patient deterioration events in the Philippine context. Many previous studies have focused on nursing students or specialized nursing areas rather than staff nurses working in medical-surgical units (Arkan et al., 2023; Alrashidi et al., 2023).

Therefore, this study aimed to determine which nurse-related factors specifically critical thinking, self-confidence, and selected demographic characteristics significantly predict the clinical decision-making of medical-surgical nurses when managing patient deterioration events. The findings of this study also served as the basis for developing a competency enhancement program to improve nurses' ability to recognize and manage patient deterioration effectively.

LITERATURE/THEORETICAL UNDERPINNING

Patient deterioration events represent a significant concern in hospital settings because they may lead to serious complications if not recognized and addressed promptly. Nurses serve as frontline healthcare providers responsible for monitoring patients and identifying early signs of clinical decline. Their ability to recognize deterioration and respond appropriately is essential for ensuring patient safety and preventing failure-to-rescue events.

Rapid Response Teams (RRTs) have been introduced in many healthcare institutions to address patient deterioration. These multidisciplinary teams are activated when early signs of deterioration are detected in hospitalized patients. Research has shown that the implementation of RRTs can significantly reduce inpatient mortality rates, cardiopulmonary arrests, and unplanned intensive care unit admissions. However, the effectiveness of RRTs depends largely on nurses' ability to recognize deterioration and initiate escalation protocols.

Critical thinking is widely considered a fundamental component of safe and effective nursing practice. It involves the ability to analyze clinical information, evaluate evidence, and make reasoned judgments regarding patient care. Critical thinking enables nurses to identify subtle clinical changes, interpret patient data accurately, and determine appropriate interventions. In complex healthcare environments, nurses with strong critical thinking skills are better equipped to manage unpredictable clinical situations and ensure optimal patient outcomes.

Self-confidence also plays an important role in nursing practice. Nurses with higher levels of self-confidence are more likely to take initiative, communicate concerns, and implement interventions during critical events. In contrast, nurses with low self-confidence may hesitate to act even when they possess the necessary knowledge and skills. Simulation-based training and clinical experience have been identified as effective strategies for enhancing self-confidence among nurses.

Clinical decision-making refers to the process of selecting appropriate actions based on the interpretation of clinical data and professional judgment. Effective decision-making requires the integration of knowledge, experience, critical thinking, and situational awareness. Experienced nurses often rely on pattern recognition and intuitive judgment developed through

Article DOI: 10.52589/AJHNM-EUE8KF9P
DOI URL: https://doi.org/10.52589/AJHNM-EUE8KF9P

repeated clinical exposure. This ability allows them to respond quickly and effectively to patient deterioration events.

This study is anchored on three theoretical frameworks: Watson-Glaser's Critical Thinking Model, Bandura's Self-Efficacy Theory, and Benner's Novice to Expert Model. Watson-Glaser's model explains the cognitive processes involved in critical thinking, including interpretation, analysis, evaluation, and inference. Bandura's Self-Efficacy Theory emphasizes the role of confidence in influencing behaviour and performance. Benner's model describes the progression of nursing expertise from novice to expert, highlighting how clinical experience shapes decision-making abilities.

Together, these frameworks provide a comprehensive understanding of how cognitive abilities, psychological factors, and professional experience influence clinical decision-making among nurses managing patient deterioration events.

METHODOLOGY

This study employed a predictive correlational research design to determine the nurse-related factors that significantly predict the clinical decision-making of medical-surgical nurses managing patient deterioration events. The design allowed the researcher to examine relationships between variables and identify predictors of clinical decision-making. The study was conducted among medical-surgical staff nurses working in selected Level 2 and Level 3 hospitals in Manila. A non-probability purposive sampling technique was employed to recruit participants who met the inclusion criteria. Participants were required to be between 22 and 59 years old, currently assigned to a medical-surgical unit, and have experienced at least two patient deterioration events per week, as self-reported in the survey questionnaire. Nurses who had worked in the hospital for less than six months or had not encountered patient deterioration events were excluded from the study. The hospitals were selected through convenience sampling, based on accessibility, willingness to participate, and approval from hospital administrators. These institutions were chosen to represent Level 2 and Level 3 healthcare facilities within Manila where patient deterioration events are commonly encountered in medical-surgical units.

A total of 290 medical-surgical staff nurses participated in the study. The sample size was determined using G*Power 3.1 for multiple linear regression analysis, with an anticipated medium effect size ($f^2 = 0.15$), a significance level of 0.05, and a statistical power of 0.95. The required minimum sample size was estimated to be lower than the actual number of participants; thus, the final sample of 290 was considered adequate to ensure sufficient statistical power and reliability of the findings. Data were collected using standardized survey instruments measuring critical thinking, self-confidence, and clinical decision-making.

Critical thinking was measured using the Critical Thinking Self-Assessment Scale–Short Form (CTSAS-SF), which consists of 60 items rated on a 6-point Likert scale, covering domains such as interpretation, analysis, evaluation, inference, explanation, and self-regulation. Higher scores indicate greater levels of critical thinking. The instrument has demonstrated good internal consistency, with a reported Cronbach's alpha of 0.969, and established construct validity.

Article DOI: 10.52589/AJHNM-EUE8KF9P
DOI URL: https://doi.org/10.52589/AJHNM-EUE8KF9P

Self-confidence was assessed using the Self-Confidence Scale developed by Hicks, which includes 12 items measuring confidence in recognizing patient deterioration, performing assessments, implementing interventions, and evaluating outcomes. Responses are rated on a 5-point Likert scale with higher scores reflecting greater self-confidence. The tool has demonstrated acceptable reliability, with a Cronbach's alpha of 0.96 and evidence of content validity.

Clinical decision-making was measured using the Clinical Decision-Making in Nursing Scale (CDMNS) developed by Jenkins, which consists of 40 items rated on a 5-point Likert scale. The instrument assesses domains such as search for alternatives, canvassing of objectives and values, evaluation of consequences, and information seeking. The CDMNS has demonstrated strong psychometric properties, with reported Cronbach's alpha ranging from 0.83 to 0.90, and established construct validity.

Data collection was conducted from January to May 2025 following approval from the institutional ethics committee and participating hospitals. Participants provided informed consent before completing the survey questionnaires.

Data were analysed using descriptive and inferential statistical methods. Multiple linear regression analysis was performed to identify significant predictors of clinical decision-making among medical-surgical nurses. The level of significance was set at 0.05.

RESULTS/FINDINGS

The results indicated that the full regression model, which included ten nurse-related variables namely critical thinking, self-confidence, age, sex, educational attainment, level of hospital, sector of hospital, years of professional service, previous rotation in non-medical-surgical units, and prior rapid response team (RRT) training, significantly predicted clinical decision-making among medical-surgical nurses. The model yielded an F value of 47.6 with a significance level of $p < .001$ and an adjusted R^2 of 0.677, indicating that approximately 67.7% of the variance in clinical decision-making was explained by the predictors included in the model.

A reduced four-factor model was subsequently developed to identify the most significant predictors of clinical decision-making. This reduced model included critical thinking, self-confidence, previous rotation in non-medical-surgical units, and prior Rapid Response Team training. The reduced model retained comparable explanatory power with an adjusted R^2 of 0.676. The results revealed that clinical decision-making scores were positively associated with higher levels of critical thinking ($b = 0.280$, $p < .001$, 95% CI [0.11, 0.45]) and self-confidence ($b = 1.124$, $p < .001$, 95% CI [0.46, 1.79]). Additionally, nurses who had previous rotations in non-medical-surgical units demonstrated higher clinical decision-making scores ($b = 4.502$, $p = .005$, 95% CI [1.35, 7.65]). Prior training related to Rapid Response Teams also significantly increased clinical decision-making scores ($b = 6.196$, $p < .001$).

The results show that both cognitive and experiential factors contribute significantly to the clinical decision-making abilities of medical-surgical nurses when managing patient deterioration events (see Table 1)

Article DOI: 10.52589/AJHNM-EUE8KF9P
DOI URL: https://doi.org/10.52589/AJHNM-EUE8KF9P

African Journal of Health, Nursing and Midwifery
ISSN: 2689-9418
Volume 9, Issue 1, 2026 (pp. 61-75)

Table 1.

Four-Factor Reduced Model of Nurse-Related Factors that Significantly Predict Clinical Decision-Making

Dimension	Nurse-Related Factors	SumSq	B coefficient	t	p	Remarks
Clinical Decision Making	*Critical Thinking*	21777	0.280	11.11	< .001	*Significant predictor*
	Self-Confidence	12076	1.124	8.27	< .001	*Significant predictor*
	Previous rotation in non-MS unit YES – NO	1399	4.502	2.82	0.005	*Significant predictor*
	Previous training related to RRT YES – NO	2457	6.196	3.73	< .001	*Significant predictor*
Overall F-test: F = 152, p < .001 $R^2 = 0.681$ *Adj.* $R^2 = 0.676$						

Note: Nurse-related factor is considered significant if the p-value is below 0.5 level of significance

DISCUSSION

Self-confidence was also identified as a strong predictor of clinical decision-making. Nurses who believed in their abilities were more likely to initiate timely interventions and advocate for patient care when deterioration occurred. This finding is consistent with previous studies that emphasize the role of self-efficacy in influencing clinical performance. For instance, Albert Bandura (1977) posited that individuals with higher self-efficacy are more likely to take initiative and perform effectively in challenging situations. Similarly, Alrashidi et al. (2023) reported that increased self-confidence among nurses is associated with improved clinical performance and competence, while Liaw et al. (2011) found that confidence enhances nurses' ability to respond appropriately during patient deterioration events. These findings are congruent with the present study, which demonstrates that self-confidence significantly contributes to effective clinical decision-making among medical-surgical nurses.

Experiential factors such as previous rotations in non-medical-surgical units and prior Rapid Response Team (RRT) training were also found to significantly influence clinical decision-making. Nurses with prior exposure to different clinical areas are likely to develop broader clinical perspectives, improved pattern recognition, and greater adaptability in managing complex patient conditions. Similarly, RRT training enhances decision-making by equipping

Article DOI: 10.52589/AJHNM-EUE8KF9P
DOI URL: https://doi.org/10.52589/AJHNM-EUE8KF9P

nurses with structured approaches to recognizing and responding to patient deterioration, improving situational awareness, and reinforcing timely escalation of care.

The strong coefficient observed for self-confidence may be attributed to its role in enabling nurses to act decisively under pressure. Nurses with higher self-confidence are more likely to trust their clinical judgment, initiate timely interventions, and communicate effectively with the healthcare team, all of which are critical during patient deterioration events. This aligns with Albert Bandura's theory, which posits that individuals with higher self-efficacy are more likely to perform tasks successfully and take initiative in challenging situations.

These findings support Benner's Novice to Expert Model, which emphasizes that clinical decision-making improves as nurses gain experience and exposure to diverse clinical situations. From a practical perspective, these results highlight the importance of structured experiential learning in hospital settings. Healthcare institutions should prioritize cross-unit rotations and regular RRT training programs to enhance nurses' clinical competence. Hospital administrators may consider integrating simulation-based training, mentorship, and interdisciplinary exposure into continuing professional development programs, as these strategies can strengthen both confidence and decision-making skills.

IMPLICATION TO RESEARCH AND PRACTICE

The findings of this study have important implications for nursing education, clinical practice, and future research.

In clinical practice, healthcare institutions may develop structured competency enhancement programs aimed at improving nurses' critical thinking, self-confidence, and clinical decision-making skills. Based on the findings of this study, a competency enhancement program, referred to as the NURSE EDGE Program, is proposed to address the key predictors identified. The program is designed to enhance nurses' competence through simulation-based learning, case-based scenario discussions, structured mentorship, and cross-unit clinical exposure. It specifically targets the development of critical thinking and self-confidence while providing experiential learning opportunities aligned with real clinical situations.

The NURSE EDGE Program may be implemented through regular training schedules, such as quarterly high-fidelity simulation sessions, monthly case reviews, and ongoing mentorship for newly hired or less experienced medical-surgical nurses. Additionally, the program integrates Rapid Response Team (RRT)–related training and interdisciplinary collaboration, enabling nurses to improve their ability to recognize and respond to patient deterioration effectively. The program is primarily intended for medical-surgical staff nurses, particularly those with limited exposure to patient deterioration events.

Hospital administrators may also strengthen Rapid Response Team training programs and encourage cross-unit clinical rotations to broaden nurses' clinical exposure. Implementing structured programs such as NURSE EDGE may contribute to improved early recognition of patient deterioration, timely clinical interventions, and overall patient safety outcomes.

Article DOI: 10.52589/AJHNM-EUE8KF9P
DOI URL: https://doi.org/10.52589/AJHNM-EUE8KF9P

For nursing education, academic institutions may incorporate simulation-based training and problem-based learning approaches into nursing curricula to prepare students for real-world patient deterioration scenarios.

Future research may explore additional factors influencing clinical decision-making, such as organizational culture, team communication, and leadership support.

CONCLUSION

This study confirmed that critical thinking and self-confidence significantly predict the clinical decision-making abilities of medical-surgical nurses managing patient deterioration events. Additionally, experiential factors such as prior rotations in non-medical-surgical units and Rapid Response Team training contribute to improved decision-making capacity. This study makes a significant contribution to the existing body of knowledge by providing empirical evidence on the combined influence of cognitive, psychological, and experiential factors on clinical decision-making among practicing medical-surgical nurses, a population that has been less frequently examined in previous research. Furthermore, it extends current literature by identifying key predictors of decision-making within the context of patient deterioration in the Philippine healthcare setting, offering context-specific insights relevant to similar resource-constrained environments. These findings highlight the importance of developing structured educational and training programs that strengthen nurses' cognitive competencies, confidence, and experiential preparedness.

FUTURE RESEARCH

Future studies may further explore the factors that influence clinical decision-making among nurses in managing patient deterioration events. While this study examined the predictive roles of critical thinking, self-confidence, and selected demographic characteristics, other potential variables may also contribute to nurses' decision-making abilities. These include workplace culture, institutional support, team dynamics, leadership influence, and external stressors within the clinical environment. Examining these factors may provide a more comprehensive understanding of the conditions that shape nurses' responses to patient deterioration. Further research may also expand the scope of participants to include nurses from other clinical areas such as intensive care units and emergency departments. These practice settings involve different clinical environments, monitoring systems, and team dynamics, which may influence how nurses recognize and respond to patient deterioration. Comparative studies across different hospital units may provide valuable insights into how clinical contexts shape decision-making processes.

Additionally, future research may consider conducting longitudinal studies to examine how training programs aimed at improving critical thinking and self-confidence influence nurses' clinical decision-making over time. Evaluating the long-term outcomes of such interventions may help determine whether competency enhancement programs lead to sustained improvements in patient care and patient safety. Qualitative research may also be conducted to explore nurses' experiences, perceptions, and challenges in managing patient deterioration

Article DOI: 10.52589/AJHNM-EUE8KF9P
DOI URL: https://doi.org/10.52589/AJHNM-EUE8KF9P

events. Such approaches may provide deeper insights into the barriers nurses encounter in clinical decision-making and escalation of care, thereby contributing to the development of more effective educational and organizational strategies.

REFERENCES

Aebersold, M. (2018). Simulation-Based learning: no longer a novelty in undergraduate education. OJIN the Online Journal of Issues in Nursing, 23(2). https://doi.org/10.3912/ojin.vol23no02ppt39

Alharbi, K., & Alharbi, M. F. (2022). Nursing students' satisfaction and Self-Confidence levels after their simulation experience. SAGE Open Nursing, 8. https://doi.org/10.1177/23779608221139080

Alrashidi, N., An, E. P., Alrashedi, M. S., Alqarni, A. S., Gonzales, F., Bassuni, E. M., Pangket, P., Estadilla, L., Benjamin, L. S., & Ahmed, K. E. (2023). Effects of simulation in improving the self-confidence of student nurses in clinical practice: a systematic review. BMC Medical Education, 23(1). https://doi.org/10.1186/s12909-
023-04793-1

Andreou, C., Papastavrou, E., & Merkouris, A. (2014). Learning styles and critical thinking relationship in baccalaureate nursing education: a systematic review. Nurse education today, 34(3), 362-371.

Arkan, B., Yılmaz, D., Çinar, H. G., & Uzun, R. (2023). Clinical Decision-Making levels of nursing students and affecting factors. Cyprus Journal of Medical Sciences, 7(6), 738–744. https://doi.org/10.4274/cjms.2021.2857

Arif, S., & Khokhar, S. (2017). A historical glance: Challenges for male nurses. JPMA The Journal of the Pakistan Medical Association, 67(12), 1889-94.

Asselin, M. E., & Fain, J. A. (2013). Effect of Reflective Practice Education on SelfReflection, insight, and Reflective thinking among experienced nurses. Journal for Nurses in Professional Development, 29(3), 111–119. https://doi.org/10.1097/nnd.0b013e318291c0cc

Bandura, A. (1977). Social Learning Theory. Prentice-Hall

Beane, A., Wijesiriwardana, W., Pell, C., Dullewe, N. P., Sujeewa, J. A., Rathnayake, R. D., ... & Haniffa, R. (2022). Recognising the deterioration of patients in acute care wards:
a qualitative study. Wellcome open research, 7.

Benner, P. (1984). From Novice to Expert: Excellence and Power in Clinical Nursing Practice. Menlo Park: Addison-Wesley.

Bhatt, J. D.O., & Swick, M. (2017). Focusing on teamwork and communication to improve patient safety. American Hospital Association | AHA News. Retrieved October 31, 2024, from https://www.aha.org/news/blog/2017-03-15-focusing-teamwork-andcommunication-improve-patient-safety

Bingham, G., Fossum, M., Hughes, L., Digby, R., Deakin, A., & Bucknall, T. (2020). The pre-medical emergency team response: Nurses' decision-making escalating deterioration to treating teams using urgent review criteria. Journal of Advanced
Nursing. https://doi.org/10.1111/jan.14433

Bourke-Matas, E., Bosley, E., Smith, K., Meadley, B., & Bowles, K. (2023). Developing a consensus-based definition of out-of-hospital clinical deterioration: A Delphi study. Australian Critical Care, 37(2), 318–

Article DOI: 10.52589/AJHNM-EUE8KF9P
DOI URL: https://doi.org/10.52589/AJHNM-EUE8KF9P

325. https://doi.org/10.1016/j.aucc.2023.05.008
Budu, H. I., Abalo, E. M., Bam, V. B., Agyemang, D. O., Noi, S., Budu, F. A., & Peprah, P. (2019). "I prefer a male nurse to a female nurse": patients' preference for, and satisfaction with nursing care provided by male nurses at the Komfo Anokye teaching hospital. BMC nursing, 18, 1-9.
Burke, J. (2022) Failure to Rescue Deteriorating Patients: A Systematic Review of Root Causes and Improvement Strategies
Chan, Z. C. (2013). A systematic review of critical thinking in nursing education. Nurse Education Today, 33(3), 236–240. https://doi.org/10.1016/j.nedt.2013.01.007
Chua, W., Mackey, S., Ng, E., & Liaw, S. (2013). Front line nurses' experiences with deteriorating ward patients: a qualitative study. International Nursing Review, 60(4),
501–509. https://doi.org/10.1111/inr.12061
Clayton, W. (2019). Overcoming barriers impeding nurse activation of rapid response teams. OJIN the Online Journal of Issues in Nursing, 24(3). https://doi.org/10.3912/ojin.vol24no03ppt22
Connors E., Krupnikov Y., and Ryan J. (2019). "How Transparency Affects Survey Responses." Retrieved from Public Opinion Quarterly DOI:10.1093/poq/nfz013.
Considine, J., Fry, M., Curtis, K., & Shaban, R. Z. (2021). Systems for recognition and response to deteriorating emergency department patients: a scoping review. Scandinavian Journal of Trauma Resuscitation and Emergency Medicine, 29(1). https://doi.org/10.1186/s13049-021-00882-6
Creswell, J. W., & Creswell, J. D. (2018). Research design: Qualitative, Quantitative, and Mixed Methods Approaches. SAGE Publications, Incorporated.
Mahfouz, R., Almutairi, A., & Eldesouky, E. (2019). Self-Confidence of Nursing Students Related to their Simulation Learning Experience. Journal of Education and Practice. https://doi.org/10.7176/jep/10-15-20
Donnelly, N., Fry, M., Elliott, R., & Merrick, E. (2024). The role of the ward nurse in recognition and response to clinical deterioration: a scoping review. Contemporary Nurse, 1–30. https://doi.org/10.1080/10376178.2024.2413125
Dresser, S., Teel, C., & Peltzer, J. (2023). Reflections from the frontline of nursing on acute patient deterioration. Journal of Clinical Nursing, 32(19-20), 7560-7567.
ElAdl, A. M., & Ismail, M. E. A. (2021). The Effect of Self-Regulated Learning Strategies on
Developing Working Memory and Achievement Goal Orientation among High School Students, 31(113), 1–18. https://doi.org/10.21608/ejcj.2021.206030
Eweida, R. S., Rashwan, Z. I., Desoky, G. M., & Khonji, L. M. (2020). Mental strain and changes in psychological health hub among intern-nursing students at pediatric and medical-surgical units amid ambience of COVID-19 pandemic: A comprehensive survey. Nurse Education in Practice, 49, 102915.
https://doi.org/10.1016/j.nepr.2020.102915
Falcó-Pegueroles, A., Rodríguez-Martín, D., Ramos-Pozón, S., & Zuriguel-Pérez, E. (2020). Critical thinking in nursing clinical practice, education and research: From attitudes to virtue. Nursing Philosophy, 22(1). https://doi.org/10.1111/nup.12332
Falguera, C. C., & Sana, E. A. (2023). Stocks and distribution of doctors, nurses, and midwives in the Philippines 2020: A descriptive ecologic study. Philippine Journal of
Health Research and Development, 27(4), 1–10

Article DOI: 10.52589/AJHNM-EUE8KF9P
DOI URL: https://doi.org/10.52589/AJHNM-EUE8KF9P

Farčić, N., Barać, I., Plužarić, J., Ilakovac, V., Pačarić, S., Gvozdanović, Z., & Lovrić, R. (2020). Personality traits of core self-evaluation as predictors on clinical decisionmaking in nursing profession. PLoS ONE, 15(5), e0233435.
https://doi.org/10.1371/journal.pone.0233435
Gambrill, E. (2006). Critical thinking in clinical practice: Improving the quality of judgments and decisions. John Wiley & Sons. Gaughan, M. R. (2022). Exploring Nurses' Experiences Caring for Patients in a Deteriorating State (Doctoral dissertation, State University of New York at Buffalo).

Hall, K. K., Lim, A., & Gale, B. (2020). The use of rapid response teams to reduce failure to rescue events: A Systematic review. Journal of Patient Safety, 16(3), S3–S7. https://doi.org/10.1097/pts.0000000000000748
Hart, P. L., Spiva, L., Dolly, L., Lang-Coleman, K., & Prince-Williams, N. (2016). Medicalsurgical nurses' experiences as first responders during deterioration events: a qualitative study. Journal of clinical nursing, 25(21-22), 3241-3251.
Hart, P. L., Spiva, L., Baio, P., Huff, B., Whitfield, D., Law, T., ... & Mendoza, I. G. (2014). Medical-surgical nurses' perceived self-confidence and leadership abilities as first responders in acute patient deterioration events. Journal of clinical nursing, 23(1920), 2769-2778.
Health Workforce (HWF). (2020, April 6). State of the world's nursing 2020: investing in education, jobs and leadership.
https://www.who.int/publications/i/item/9789240003279?utm_source=chatgpt.com
Herdrich, L. J. (2019). Barriers to Timely Activation of Rapid Response Teams (Doctoral dissertation, Walden University).
Hecht, J. D., Yoder, L. H., Danesh, V., & Heitkemper, E. M. (2023). A systematic review of the facilitators and barriers to rapid response team activation. Worldviews on
Evidence-Based Nursing, 21(2), 148–157. https://doi.org/10.1111/wvn.12700
Hicks, F. D., Merritt, S. L., & Elstein, A. S. (2003). Critical thinking and clinical decisionmaking in critical care nursing: a pilot study. Heart & Lung, 32(3), 169–
180. https://doi.org/10.1016/s0147-9563(03)00038-4
Hicks, F. D., Coke, L., & Li, S. (2009). Report of findings from the effect of high-fidelity simulation on nursing students' knowledge and performance: a pilot study. National Council of State Boards of Nursing.
Hill, T. V. (2022). A predictive correlational study of higher education leaders' emotional intelligence based upon leadership style and gender (Publication No. 3767) [Doctoral dissertation, Liberty University]. Liberty University Digital
Commons. https://digitalcommons.liberty.edu/doctoral/3767
Holtsmark, C., Larsen, M. H., Steindal, S. A., & Solberg, M. T. (2024). Critical care nurses' role in rapid response teams: A qualitative systematic review. Journal of Clinical
Nursing, 33(10), 3831–3843. https://doi.org/10.1111/jocn.17196
Hosny, R., Hussein, R. S., Hussein, W. M., Hakim, S. A., & Habil, I. S. (2024). Effectiveness of Rapid Response Team implementation in a tertiary hospital in Egypt: an interventional study. BMJ Open Quality, 13(3), e002540.
Jeffries, P. R. (2012). Simulation in nursing education: From conceptualization to evaluation. National League for Nursing.
Kaya, S., & Bakir, G. K. (2024). The relationship between clinical decision-making levels and self-efficacy levels of operating room nurses. Perioperative Care and Operating

Article DOI: 10.52589/AJHNM-EUE8KF9P
DOI URL: https://doi.org/10.52589/AJHNM-EUE8KF9P

Room Management, 37, 100416. https://doi.org/10.1016/j.pcorm.2024.100416
Krom, Z. R. (2020). Patient deterioration in the adult Progressive Care unit. Dimensions of Critical Care Nursing, 39(4), 211–218. https://doi.org/10.1097/dcc.0000000000000421
Kusterbeck, S. (2024,). Critical thinking in nursing: Foundation for quality care. Nurse.com. https://www.nurse.com/blog/critical-thinking-nursing-quality-care-nsp/
Lalor, J. G., Clarke, M., & Sheaf, G. (2012). An evaluation of the effectiveness of information literacy training for undergraduate midwives to improve their ability to access evidence for practice. Nurse Education in Practice, 12(5), 269–272.
https://doi.org/10.1016/j.nepr.2012.06.005
Lamichhane, G. (2025). Shaping professional nursing practice using Benner's novice to expert theory. British Journal of Nursing, 34(22), 1133–1137. https://doi.org/10.12968/bjon.2024.0387
Lave, J., & Wenger, E. (1991). Situated Learning: Legitimate Peripheral Participation. Cambridge University Press.
Lee, D. S., Abdullah, K. L., Chinna, K., Subramanian, P., & Bachmann, R. T. (2020). Critical Thinking Skills of RNs: Exploring Demographic Determinants. The Journal of Continuing Education in Nursing, 51(3), 109–117. https://doi.org/10.3928/00220124-20200216-05
Liu, Q., Zheng, X., Xu, L., Chen, Q., Zhou, F., & Peng, L. (2023). The effectiveness of education strategies for nurses to recognise and manage clinical deterioration: a systematic review. Nurse Education Today, 126, 105838.
Liu, Q., Xie, C., Tan, J., Xu, L., Zhou, F., & Peng, L. (2024). Exploring the nurses' experiences in recognising and managing clinical deterioration in emergency patients:
A qualitative study. Australian Critical Care, 37(2), 309-317.
Lopez-Garrido, G. (2023). Bandura's Self-Efficacy Theory of Motivation in Psychology. Simply Psychology. https://www.simplypsychology.org/self-efficacy.html
Madani, H. E., Harch, I. E., Tachfouti, N., Fakir, S. E., Aalouane, R., & Berraho, M. (2023b). Estrés psicológico y sus factores relacionados entre estudiantes de enfermería marroquíes: un estudio transversal. Enfermería Clínica, 33(3), 205–215. https://doi.org/10.1016/j.enfcli.2022.11.004
Mahon, M. M. (2010). Clinical decision-making in palliative care and end of life care. Nursing Clinics of North America, 45(3), 345–362. https://doi.org/10.1016/j.cnur.2010.03.002
Mahmoud, A. S., & Mohamed, H. A. (2017). Critical Thinking Disposition among Nurses Working in Puplic Hospitals at Port-Said Governorate. International Journal of Nursing Sciences, 4(2), 128–134. https://doi.org/10.1016/j.ijnss.2017.02.006
Makiaway, J., Raganas, S. E., Serbo, D. N., & Acuña, A. (2024). A glimpse of my progress: exploring reflective journaling as an innovation to enhance metacognitive skills, motivation, and acceptability of learners. Journal of Arts, Humanities and Social Science., 1(2), 19–27. https://doi.org/10.69739/jahss.v1i2.104
Martland, J., Chamberlain, D., Hutton, A., & Smigielski, M. (2016). Communication and general concern criterion prior to activation of the rapid response team: A grounded theory. Australian Health Review, 477–483. https://doi.org/10.1071/ah15123
Mendívil-Pérez, M., Choperena, A., Salas, V., Chocarro-Haro, M., & Oroviogoicoechea, C. (2025). Interventions to develop clinical judgment among nurses: A systematic review with narrative synthesis. Nurse Education in Practice, 84, 104300. https://doi.org/10.1016/j.nepr.2025.104300

Article DOI: 10.52589/AJHNM-EUE8KF9P
DOI URL: https://doi.org/10.52589/AJHNM-EUE8KF9P

McHugh, M. & Lake, E. (2010) Understanding Clinical Expertise: Nurse Education, Experience, and the Hospital Context. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2998339/

Michie, S., Van Stralen, M. M., & West, R. (2011). The behaviour change wheel: A new method for characterising and designing behaviour change intervention.
https://doi.org/10.1186/1748-5908-6-42

Mohammmed, I. S., Hutchinson, A. F., Sungkar, Y., & Considine, J. (2018). Nurses' role in recognising and responding to clinical deterioration in surgical patients. Journal of Clinical Nursing. 1920–1930. https://doi.org/10.1111/jocn.14331

Msn, K. a. a. G., & DNSc, J. a. P. (2020). Repeated Simulation Experience on Self- Confidence, Critical Thinking, and Competence of Nurses and Nursing Students—An Integrative Review. SAGE Open Nursing, 6. https://doi.org/10.1177/2377960820927377

Nair, G. G., Hellsten, L. M., & Stamler, L. L. (2017). Accumulation of content validation evidence for the Critical Thinking Self-Assessment scale. Journal of Nursing
Measurement, 25(1), 156–170. https://doi.org/10.1891/1061-3749.25.1.156

Nemati-Vakilabad, R., Khoshbakht-Pishkhani, M., Maroufizadeh, S., & Javadi-Pashaki, N. (2024). Translation and validation of the Persian version of the perception to care in acute situations (PCAS-P) scale in novice nurses. BMC Nursing, 23(1).
https://doi.org/10.1186/s12912-024-01760-z

National Institutes of Health (NIH). (1994). Nursing Practice [Chapter in Nursing Health, & Environment]. Retrieved from National Center for Biotechnology Information, https://www.ncbi.nlm.nih.gov/books/NBK232401/

Papathanasiou, I. V., Kleisiaris, C. F., Fradelos, E. C., Kakou, K., & Kourkouta, L. (2014). Critical Thinking: the development of an essential skill for nursing students. Acta Informatica Medica, 22(4), 283. https://doi.org/10.5455/aim.2014.22.283-286

Payan-Carreira, R., Sacau-Fontenla, A., Rebelo, H., Sebastião, L., & Pnevmatikos, D. (2022). Development and validation of a Critical Thinking Assessment-Scale Short form. Education Sciences, 12(12), 938. https://doi.org/10.3390/educsci12120938

Phillips, J, Malliaris, A. & Bakerjian, D. (2021). Nursing and Patient Safety. Retrieved from https://psnet.ahrq.gov/primer/nursing-and-patient-safety

Porter, J., Morphet, J., Missen, K., & Raymond, A. (2013). Preparation for high-acuity clinical placement: confidence levels of final-year nursing students. Advances in
Medical Education and Practice, 83. https://doi.org/10.2147/amep.s42157

Rababa, M., & Al-Rawashdeh, S. (2020). Critical care nurses' critical thinking and decision making related to pain management. Intensive and Critical Care Nursing, 63, 103000. https://doi.org/10.1016/j.iccn.2020.103000

Rizany, I., Hariyati, R. T. S., & Handayani, H. (2018b). Factors that affect the development of nurses' competencies: a systematic review. Enfermería Clínica, 28, 154–157. https://doi.org/10.1016/s1130-8621(18)30057-3

Silva, G. O., Oliveira, F. S. E., Coelho, A. S. G., Cavalcante, A. M. R. Z., Vieira, F. V. M., Fonseca, L. M. M., Campbell, S. H., & Del Angelo Aredes, N. (2022). Effect of simulation on stress, anxiety, and self-confidence in nursing students: Systematic review with meta-analysis and meta-regression. International Journal of Nursing
Studies, 133, 104282. https://doi.org/10.1016/j.ijnurstu.2022.104282

Standing, M. (2008). Clinical judgement and decision-making in nursing – nine modes of practice in a revised cognitive continuum. Journal of Advanced Nursing, 62(1), 124–
134. https://doi.org/10.1111/j.1365-2648.2007.04583.x

Article DOI: 10.52589/AJHNM-EUE8KF9P
DOI URL: https://doi.org/10.52589/AJHNM-EUE8KF9P

Smith, D., Cartwright, M., Dyson, J., Hartin, J., & Aitken, L. M. (2021). Barriers and enablers of recognition and response to deteriorating patients in the acute hospital setting: A theory-driven interview study using the theoretical domains framework.
Journal of Advanced Nursing https://doi.org/10.1111/jan.14830
Sterner, A., Nilsson, M. S., & Eklund, A. (2023). The value of simulation-based education in developing preparedness for acute care situations: An interview study of new graduate nurses' perspectives. Nurse Education in Practice, 67, 103549. https://doi.org/10.1016/j.nepr.2023.103549
Sun, Y., Yin, Y., Wang, J., Ding, Z., Wang, D., Zhang, Y., Zhang, J., & Wang, Y. (2022). Critical thinking abilities among newly graduated nurses: A cross-sectional survey study in China. Nursing Open, 10(3), 1383–1392. https://doi.org/10.1002/nop2.1388
Tan, S. C., & Tee, M. Y. (2021b). In-service educators co-constructing knowledge in a PBL setting: Phases of interaction. Interdisciplinary Journal of Problem-based Learning,
15(2). https://doi.org/10.14434/ijpbl.v15i2.28769
Tajvidi, M., & Hanjani, S. M. (2019). The relationship between critical thinking and clinical competence in nurses. Strides in Development of Medical Education, In Press(In
Press). https://doi.org/10.5812/sdme.80152
Tiffen, J., Corbridge, S. J., & Slimmer, L. (2014). Enhancing clinical decision-making: development of a contiguous definition and conceptual framework. Journal of Professional Nursing, 30(5), 399–405. https://doi.org/10.1016/j.profnurs.2014.01.006
Thompson, C., & Stapley, S. (2011). Do educational interventions improve nurses' clinical decision-making and judgement? A systematic review. International journal of nursing studies, 48(7), 881-893.
Tomita, R. (2024). The relationship between general self-efficacy and nursing practice competence for second-year nurses: Empirical quantitative research. Nursing Open, 11(7). https://doi.org/10.1002/nop2.2233
Urhan, E., Zuriguel-Perez, E., & Seren, A. K. H. (2021). Critical thinking among clinical nurses and related factors: A survey study in public hospitals. Journal of Clinical
Nursing, 31(21–22), 3155–3164. https://doi.org/10.1111/jocn.16141
Vygotsky, L. S. (1978). Mind in Society: The Development of Higher Psychological Processes. Harvard University Press.
Waldie, J., Day, T., & Tee, S. (2016). Patient safety in acute care: are we going around in circles? British Journal of Nursing, 25(13), 747–751. https://doi.org/10.12968/bjon.2016.25.13.747
Wei, B., Wang, H., Li, F., Long, Y., Zhang, Q., Liu, H., Tang, X., & Rao, M. (2023). Effectiveness of Problem-Based Learning on development of nursing students' critical thinking skills. Nurse Educator, 49(3), E115–E119. https://doi.org/10.1097/nne.0000000000001548
Yardi, S. (2024). Nursing Workforce Statistics 2024 By Healthcare Management. Retrieved from https://media.market.us/nursing-workforce-statistics/
Zainal, N. H., Islam, M. A., Rasudin, N. S., Mamat, Z., Hanis, T. M., Hasani, W. S. R., &
Musa, K. I. (2025). Critical Thinking and Clinical Decision Making among Registered Nurses in Clinical Practice: A Systematic Review and Meta-Analysis. Nursing Reports, 15(5), 175. https://doi.org/10.3390/nursrep15050175
Zhang, Q., Lee, K., Mansor, Z., Ismail, I., Guo, Y., Xiao, Q., & Lim, P. Y. (2023). Effects of a rapid response team on patient outcomes: a Systematic review. Heart & Lung, 63,
51–64. https://doi.org/10.1016/j.hrtlng.2023.09.007

Article DOI: 10.52589/AJHNM-EUE8KF9P
DOI URL: https://doi.org/10.52589/AJHNM-EUE8KF9P

Zulmaulida, R., Wahyudin, N., & Dahlan, J. A. (2018). Watson-Glaser's critical thinking skills. Journal of Physics Conference Series, 1028, 012094. https://doi.org/10.1088/1742-6596/1028/1/012094

Zuriguel-Pérez, E., Falcó-Pegueroles, A., Agustino-Rodríguez, S., Del Carmen GómezMartín, M., Roldán-Merino, J., & Lluch-Canut, M. T. (2019). Clinical nurses' critical thinking level according to sociodemographic and professional variables (Phase II): A correlational study. Nurse Education in Practice, 41, 102649. https://doi.org/10.1016/j.nepr.2019.102649

Zuriguel-Perez et., al. (2017). Development and Psychometric Properties of the Nursing Critical Thinking in Clinical Practice Questionnaire

Zuriguel-Pérez, E., Falcó-Pegueroles, A., Roldán-Merino, J., Agustino-Rodriguez, S., Del Carmen Gómez-Martín, M., & Lluch-Canut, M. T. (2017). Nursing Critical Thinking in Clinical Practice questionnaire [Dataset]. In PsycTESTS Dataset. https://doi.org/10.1037/t65847-000

Article DOI: 10.52589/AJHNM-EUE8KF9P
DOI URL: https://doi.org/10.52589/AJHNM-EUE8KF9P