



The Influence of Knowledge And Supervision Techniques on Nurses' Compliance With The Implementation of Early Warning Score (EWS) With Work Attitude As An Intervening

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Article Info

Article history:

Received August 13, 2025

Revised August 15, 2025

Accepted September 21, 2025

Keywords:

Compliance,
Knowledge,
Supervisi,
Attitude

ABSTRACT

Patient safety is a top priority in hospital services, one of which is achieved through the implementation of early detection systems such as the Early Warning Score (EWS) to prevent the deterioration of patients' clinical conditions. However, nurse compliance in applying EWS remains a challenge, as observed at Annisa Hospital Cikarang. To analyze the influence of knowledge and supervision techniques on compliance with EWS implementation, with work attitude as an intervening variable. This study employed a quantitative method with a cross-sectional approach. The index analysis was conducted using the Three Box Method, and data were analyzed using Structural Equation Modeling-Partial Least Squares (SEM-PLS). The population comprised all nurses working in the Emergency Department (ED) and inpatient wards at Annisa Hospital Cikarang. A total sampling technique was applied, resulting in 100 respondents. The findings revealed that, simultaneously, knowledge, supervision techniques, and work attitude significantly influenced compliance with EWS implementation. Partially, knowledge and supervision techniques also had a positive effect on work attitude. Furthermore, work attitude was proven to mediate the effect of knowledge and supervision techniques on nurse compliance. The Three Box Method analysis indicated that although the compliance index was categorized as high, weaknesses persisted in the dimensions of professional responsibility and timely reporting.

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1. INTRODUCTION

Hospitals have a responsibility to ensure patient safety, including through early detection systems such as the Early Warning Score (EWS). Nurse compliance in implementing EWS is essential for the system's effectiveness. Factors such as knowledge, supervisory techniques, and work attitudes can

influence the level of compliance. Annisa Hospital Cikarang has experienced a decline in compliance with EWS implementation, accompanied by an increase in Code Blue incidents. Every procedure or action performed in a hospital carries potential risks to patient safety. According to the World Health Organization, one in ten patients worldwide experiences unsafe care, making this a global concern [1]. Patient safety must therefore be prioritized by healthcare providers to ensure safer and more controlled hospital care.

Mortality rate is a critical indicator of hospital performance. In the United States, the annual inpatient mortality caused by adverse events is estimated at 33.6 million cases per year, or approximately 44,000 deaths per day [2]. Reducing patient mortality can positively impact hospital service quality [3]. Consequently, hospitals must adopt strategies to prevent and respond promptly to changes in patient conditions. Improving healthcare quality remains a primary focus in ensuring patient safety. One key aspect of patient safety is the ability of healthcare professionals to detect early signs of clinical deterioration. For this reason, the implementation of early detection systems such as EWS has become an integral part of nursing and medical care in hospitals.

The Early Warning Score (EWS) is an early detection tool designed to predict patient deterioration or critical events. A study in Turkey involving 104 patients revealed that ICU transfer rates, in-hospital cardiac arrest (IHCA) frequency, and 24-hour mortality rates were significantly higher in certain patient groups. Consistent application of EWS plays a vital role in reducing mortality due to sudden, unpredicted cardiac arrest. Undetected cardiac arrest is one of the primary triggers for Code Blue activation in hospitals. Reported that most cases of cardiac arrest are preceded by observable changes in vital signs occurring within 6 to 8 hours before the event.

However, nurse compliance with EWS in hospitals faces several challenges. Barriers to EWS implementation include unavailability of equipment, insufficient understanding, the need for additional training, lack of supervision, poor communication between nurses and physicians, and increased demand for critical care services [4]. Nevertheless, EWS can be effectively utilized when nurses conduct continuous patient monitoring within the first 24 hours of hospital admission.

Compliance Theory, introduced by Stanley Milgram (1963), explains that individuals tend to obey orders or instructions from authority figures. This theory emphasizes that compliance often results not solely from awareness or understanding, but from social pressure and the perceived power of authority, meaning compliant behavior is frequently driven by external factors rather than intrinsic motivation. According to Milgram (1963), one factor influencing compliance is the level of knowledge. Knowledge is the most fundamental stage of learning, involving the ability to recall information, facts, concepts, and procedures. Nurses with strong knowledge of EWS are more likely to detect early signs of patient deterioration and perform timely interventions according to established protocols. Conversely, insufficient knowledge of early warning signs may lead to non-compliance or negligence in patient monitoring, increasing the risk of unexpected cardiac arrest.

In addition to knowledge, another factor affecting nurse compliance with EWS is supervisory support from superiors. Describe supervision as a managerial function focused on directing—guiding, motivating, and monitoring employees to ensure tasks are completed in line with organizational goals. Work attitude, as defined by, refers to evaluative statements—favorable or unfavorable—about objects, individuals, or events, reflecting how a person feels about something. A study by [5] demonstrated that high levels of knowledge and effective supervision from superiors are significantly and positively associated with nurses' work attitudes in performing standard-based nursing tasks, including EWS implementation.

Annisa Hospital Cikarang consistently strives to maintain service quality and patient safety as top priorities in its operations. Through the application of high service standards and continuous development of healthcare professionals' competencies, the hospital aims to provide safe, effective, and

high-quality care. This commitment is supported by strict monitoring systems, routine staff training, and standardized protocols to minimize risks and ensure patient safety. However, data from the hospital's Patient Safety Committee indicate an increase in Code Blue incidents over the past three years. Specifically, in early 2025, there was a rise in events: in January, two Code Blue cases were reported in the inpatient ward; in February, four cases occurred (including one death); and in March, five cases were reported (with one patient dying before ICU transfer).

Furthermore, data from the hospital's Quality Committee show a decline in nurse compliance with EWS over the same period. In January 2025, compliance was recorded at 82%, dropping to 74% in February, and further decreasing to 72% in March, well below the target compliance rate of 100%. Based on these background issues and observed phenomena, this study aims to evaluate the influence of knowledge and supervisory techniques on nurse compliance in implementing EWS, with work attitude serving as an intervening variable. The research seeks to analyze the relationships between these variables and provide contributions to the fields of nursing science hospital management, and patient safety quality committees.

2. METHOD

This study employed a quantitative method with a cross-sectional approach, in which data were collected at a single point in time during a specified period. The study population consisted of 100 nurses working in the Emergency Department (ED) and inpatient wards of Annisa Hospital Cikarang. A saturated sampling technique was applied, whereby the entire population was included as the sample, resulting in a total of 100 respondents.

Data collection utilized a quantitative approach through a structured survey conducted directly at the respondents' workplace. The instrument used was a questionnaire that had undergone a validity test and reliability analysis to ensure its accuracy and consistency. Data analysis was carried out using descriptive statistics with the three-box method, as well as Partial Least Squares Structural Equation Modeling (PLS-SEM)

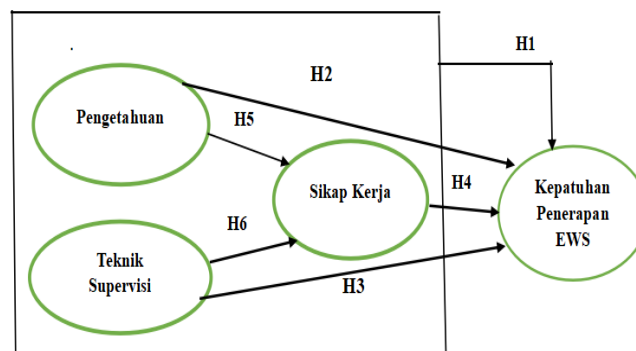


Figure 1. Conceptual Framework

3. RESULTS AND DISCUSSION

3.1 Respondent Characteristics

Based on gender, the respondents were predominantly female, accounting for 73% of the total sample. Regarding educational background, the majority held a Diploma in Nursing (D3) at 48%, although 16 nurses were currently pursuing a Bachelor of Nursing (S1-Ners) degree. In terms of age distribution, 45% of respondents were between 21 and 30 years old, while only 8% were over 50 years old. Concerning length of service, the majority had worked for 1–5 years (57%), followed by those with more than 10 years of experience (34%), and the smallest group had 5–10 years of service (9%).

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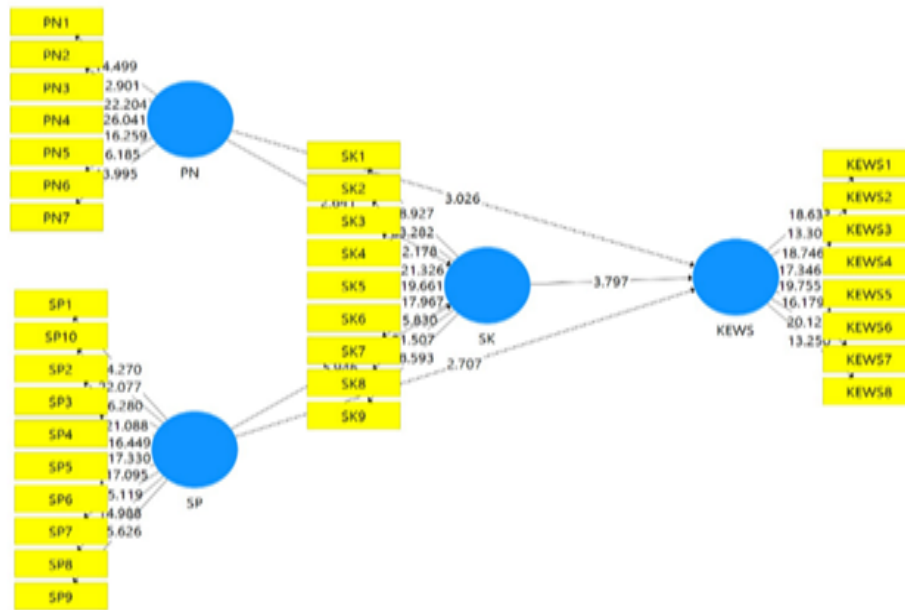


Figure 2. Bostraping Model estimation Result

Based on table figure 3,2 above, the hypothesis results of all paths tested in the research model proved significant ($p < 0.05$)

Table 2. Hypothesis result

Hypothesis	Result test	Conclusion
The simultaneous effect of knowledge, supervision techniques, and work attitude on compliance with the implementation of the Early Warning Score (EWS)	$p = 0.000$; $R^2 = 0.866$	Accepted
The effect of knowledge on compliance with the implementation of EWS	Path Coefficient = 0.311; $p = 0.003$	Accepted
The effect of supervision techniques on compliance with the implementation of EWS	Path Coefficient = 0.280; $p = 0.015$	Accepted
The effect of work attitude on compliance with the implementation of EWS	Path Coefficient = 0.384; $p = 0.000$	Accepted
The effect of knowledge on work attitude	Path Coefficient = 0.294; $p = 0.008$	Accepted
The effect of supervision techniques on work attitude	Path Coefficient = 0.617; $p = 0.000$	Accepted
The effect of knowledge on compliance with the implementation of EWS with work attitude as an intervening variable	Path Coefficient = 0.113; $p = 0.008$	Accepted
The effect of supervision techniques on compliance with the implementation of EWS with work attitude as an intervening variable	Path Coefficient = 0.237; $p = 0.007$	Accepted

Source: SMARTPLS 4.0 Processed Results (2025)

3.2 Discussion

3.2.1 Knowledge, Supervisory Techniques, and Work Attitude Simultaneously Affect Compliance with the Implementation of EWS.

The findings of this study demonstrate a simultaneous effect of knowledge, supervisory techniques, and work attitude on compliance with the implementation of the Early Warning Score (EWS). This indicates that these three variables collectively contribute positively to improving nurses' adherence in carrying out early patient condition monitoring systems.

The analysis revealed that nurses' knowledge of EWS is generally in the high category, particularly in the procedural dimension. This suggests that most nurses have a good understanding of the clinical steps required when a patient's EWS score is elevated. However, the conceptual knowledge dimension remains low, particularly in understanding the primary objectives of EWS implementation. This condition highlights the need for further educational efforts emphasizing the essence and clinical benefits of EWS as an early detection system for patient deterioration. According to, knowledge serves as a critical predisposing factor in shaping compliance with clinical procedures.

Supervisory techniques applied by head nurses were generally assessed as good by the nursing staff, especially in the coaching dimension, such as direct guidance during EWS practice. However, support in the form of corrective actions and encouragement for continuous improvement was perceived as less optimal. This suggests that although supervisors are present in the monitoring process, the push for regular evaluation and quality enhancement of EWS implementation is not yet consistent. [14] emphasize that effective supervision involves continuous observation, evaluation, and training, which play an essential role in promoting adherence to clinical protocols.

Overall, nurses' work attitudes were found to be positive, particularly in the conative aspect, which reflects a high level of initiative in performing tasks without direct supervision. However, the cognitive dimension showed that some nurses still lack full understanding or belief in the importance of the EWS procedure for patient safety. This finding suggests that a positive attitude should be further reinforced in terms of belief and meaning attached to the work procedure. [6] note that work attitude reflects mental readiness and commitment to tasks, acting as a bridge between knowledge and compliance behavior.

Nurses' compliance with EWS implementation was generally high, as evidenced by their adherence to Standard Operating Procedures (SOP). Nonetheless, professional responsibility should be further strengthened, especially regarding the awareness that patient monitoring is a core nursing duty. [7] stress that compliance involves not only following procedures but also ensuring timeliness and accuracy in execution. A lack of understanding in this regard can hinder consistent quality and patient safety.

These findings are further supported by Compliance Theory [8], which states that compliance is influenced by authority structures and social influences, not solely by individual awareness. In the nursing context, the presence of supervision, a safety culture, and a positive work attitude greatly affect adherence to EWS procedures. Previous studies ([9]; [10]; [11]; [12]) also confirm that improved knowledge, active supervision, and a positive work attitude significantly contribute to the effective implementation of EWS. Interventions targeting cognitive, social, and psychological aspects should be conducted simultaneously to encourage nurses to understand and believe that EWS implementation directly impacts patient safety.

3.2.2 The Influence of Knowledge on Compliance with the Implementation of the Early Warning Score (EWS)

Nurses' knowledge was found to have a significant influence on their compliance in implementing the Early Warning Score (EWS) procedure. The higher the level of knowledge, the greater

the likelihood that nurses will adhere to standard operating procedures (SOPs). Analysis using the Tree Box Method indicated that nurses at Annisa Hospital, Cikarang, demonstrated a high overall level of knowledge, with the highest dimension observed in procedural understanding—particularly regarding clinical escalation steps when the EWS score increases. This reflects the nurses’ readiness to respond to patient deterioration.

However, the conceptual dimension scored the lowest, indicating a gap in understanding the fundamental objectives of EWS implementation. This imbalance suggests that although nurses are capable of performing the procedure, their philosophical and theoretical understanding remains suboptimal. [13] notes, sound knowledge encompasses not only technical skills but also deep conceptual understanding, serving as a key predisposing factor in shaping compliance with patient safety protocols.

Consistent with the views of [7], adequate clinical knowledge forms the foundation for nursing decision-making. Knowledge strengthens the understanding of the impact of nursing actions, thereby enhancing compliance with procedures such as EWS. Previous studies by [9] [10] further affirm that a strong understanding of the EWS system increases the effectiveness of its implementation and has a direct impact on patient safety.

Therefore, enhancing nurses’ knowledge should be accompanied by strategies to strengthen both conceptual understanding and practical skills through regular training, case simulations, and periodic evaluations. Such measures ensure that knowledge is consistently reflected in nursing practice. Nurse compliance with EWS procedures at Annisa Hospital, Cikarang, was also categorized as high. Nurses generally followed SOPs, including accurate recording of vital signs, timely reporting of patient conditions, and delivering interventions based on EWS scores. The statement “I always implement EWS according to SOP” achieved the highest index score, reflecting strong technical implementation in practice.

Nonetheless, the lowest score was recorded in the professional responsibility dimension, particularly regarding awareness that patient condition monitoring is a core nursing duty. This finding indicates the need to strengthen nurses’ understanding of their professional role and responsibilities in the context of EWS. A lack of awareness or belief in this role may affect procedural consistency and the quality of care. According to [7], compliance with nursing procedures involves more than technical execution—it also encompasses awareness, timeliness, and professional responsibility. Thus, refresher education through training and dissemination regarding nurses’ roles in early detection of patient deterioration via EWS is essential to ensure comprehensive compliance.

3.2.3 The Influence of Supervision Techniques on Compliance with the Implementation of the Early Warning Score (EWS)

This study demonstrates that supervision techniques have a significant influence on nurses’ compliance with the implementation of the Early Warning Score (EWS). In other words, the more effective the supervision provided by supervisors or ward heads, the higher the nurses’ compliance in performing EWS procedures in accordance with standard operating procedures (SOPs). Structured, consistent, and continuous supervision fosters more disciplined, responsible, and standardized work behavior.

Analysis using the Tree Box Method revealed that nurses’ perceptions of supervision techniques were in the high category. The coaching and mentoring dimension scored the highest, particularly in terms of direct guidance provided by supervisors during EWS implementation. However, the corrective action dimension recorded the lowest score, indicating that support for performance improvement has not yet been optimal. Furthermore, ongoing encouragement from supervisors for continuous

improvement was perceived as insufficient. This suggests that the supervisory function has not been fully implemented, particularly in terms of motivation and routine evaluation of EWS practices.

These findings align with the supervision theory proposed by [26], which defines supervision as a critical managerial function to ensure compliance with clinical practice. Effective supervision includes direction, monitoring, evaluation, coaching, and corrective action. In the context of EWS, the presence of supervisors who actively oversee and provide feedback not only ensures technical compliance but also enhances nurses' motivation and sense of responsibility. This relationship can also be explained through Stanley Milgram's Compliance Theory (1963), which posits that individuals are more likely to comply with authority when guidance is clear, consistent, and reinforced by visible oversight. Within the hospital system, the role of the ward head as an authority figure is crucial in fostering a culture of compliance with SOPs.

Previous studies support these findings. [14] reported a significant relationship between ward head supervision and nurses' compliance with EWS. Similarly, [10] found that clinical supervision could enhance the implementation of patient safety protocols. Moreover, [10] emphasized that effective supervision fosters professional behavior and encourages adherence to service standards.

3.2.4 The Influence of Work Attitude on Compliance with the Implementation of the Early Warning Score (EWS)

The findings of this study indicate that nurses' work attitudes have a significant influence on their level of compliance with the implementation of the Early Warning Score (EWS). The more positive the nurses' attitudes toward their professional responsibilities, the greater the likelihood of consistent adherence to EWS procedures in accordance with standard operating procedures (SOPs). A positive work attitude reflects mental readiness, motivation, and commitment to service standards, all of which contribute to compliant behavior in following patient safety protocols.

Analysis using the Three Box Method revealed that the average work attitude index was in the high category, indicating that most nurses hold positive views toward EWS implementation. The conative dimension scored the highest, particularly in the statement, "I always take the initiative to carry out my duties without constant supervision from my superior." This finding suggests that nurses demonstrate proactivity and a strong sense of responsibility in performing their duties, including EWS application, without relying solely on direct oversight.

Conversely, the lowest index was found in the cognitive dimension, especially in the statement, "I believe that complying with work procedures such as EWS is important for patient safety." This suggests that some nurses may not fully understand the urgency or benefits of EWS implementation, nor how adherence to the procedure directly impacts patient safety. In this study, the concept of work attitude refers to the framework proposed, which categorizes attitudes into three dimensions: cognitive (beliefs and understanding of work), affective (feelings toward work), and conative (readiness to act according to beliefs). These three dimensions shape an individual's tendency to respond to their job. In the context of EWS, a positive work attitude encourages nurses to take responsibility, take pride in their role, and be disciplined in accurately recording and reporting EWS scores.

Other theoretical perspectives also reinforce these findings. [7] emphasize that a positive attitude toward patient safety and professional responsibility is a key driver of compliance with SOPs such as EWS. Through the cognitive, affective, and psychomotor domains of work attitudes, [7] argue that when nurses believe a procedure is important, possess moral responsibility, and are motivated, compliance increases. Similarly, [8] notes that individuals are more likely to comply with authoritative rules when they have internalized the importance of those directives as a form of moral responsibility.

Previous research supports these results. [11] found that positive perceptions and attitudes toward EWS play a crucial role in its implementation. [30] further stated that a positive attitude can

sustain good practices even when nurses' knowledge levels are low. [16] also confirmed that attitude is a primary factor influencing compliance with EWS. Overall, these results highlight that work attitude is not merely a supporting factor but a key driver in shaping compliance with patient safety procedures such as EWS. Therefore, hospitals should strengthen work attitudes by enhancing conceptual understanding (cognitive), fostering motivation, and cultivating an organizational culture that values discipline and professional responsibility.

The study also shows that the overall level of nurse compliance with EWS implementation is high. This indicates that, in general, nurses have performed EWS procedures in accordance with SOPs, including recording vital signs, reporting patient conditions in a timely manner, and implementing interventions based on the obtained scores. The highest index was found in the dimension of compliance with procedures, particularly the statement, "I always implement EWS in accordance with the existing SOP." This reflects strong awareness and consistency among nurses in adhering to procedural requirements. However, the lowest index was observed in the dimension of professional responsibility, especially in the statement, "I realize that monitoring the patient's condition is my duty and responsibility." This suggests a gap in nurses' understanding or awareness regarding the essence of their professional responsibilities in the context of patient safety.

These findings indicate the need for educational interventions and reinforcement of professional values, such as refresher training on the role of nurses in early detection of critical conditions through EWS, as well as re-socialization of SOPs and clinical regulations. Such efforts are essential to ensure that every nurse understands that EWS implementation is not merely an administrative task, but an ethical and professional responsibility to safeguard patient safety. By fostering such understanding and awareness, compliance with EWS can be maintained and even enhanced—not merely as an obligation under SOPs, but as a commitment to service quality and patient safety.

3.2.5 The Influence of Knowledge on Work Attitude

The results of this study demonstrate that knowledge has a significant influence on nurses' work attitudes. This indicates that the higher the level of knowledge a nurse possesses, the more positive their tendency to demonstrate a good work attitude, particularly in carrying out tasks such as implementing the Early Warning Score (EWS) system. Strong knowledge serves as an essential foundation for understanding work procedures and reinforcing nurses' awareness of the importance of patient safety. Based on the analysis using the Three Box method, the average index for the knowledge variable fell into the high category. This means that nurses at Annisa Hospital generally have a good understanding of EWS. The procedural knowledge dimension scored the highest, reflected in the strong agreement with the statement, "I know the clinical escalation procedures if the score is high." This finding indicates that the majority of nurses in both the emergency and inpatient departments understand the clinical steps that must be taken immediately when a patient's EWS indicates a critical or deteriorating condition.

However, the lowest index value was found in the conceptual knowledge dimension, particularly for the statement, "I understand the purpose of implementing EWS." This suggests that some nurses may not fully grasp the essence and objectives of the EWS system, highlighting the need to strengthen conceptual understanding through targeted training and capacity-building programs. In nursing practice, knowledge is a fundamental element that shapes professional thinking, attitudes, and behaviors. Ellis explain that a strong understanding of nursing roles and responsibilities helps form ethical and positive work attitudes. Similarly, [7] state that a solid knowledge base in nursing influences nurses' beliefs and values, which in turn shape their professional attitudes and actions in clinical settings.

Comparable findings have been reported internationally. A study by in China identified a positive relationship between knowledge, attitudes, and nursing practices in the prevention of medical device-related injuries. Likewise, [18] in Saudi Arabia found that higher knowledge levels were associated

with better attitudes and practices in infection control. Both studies support the notion that knowledge impacts not only practice directly but also plays a critical role in shaping work attitudes that enhance optimal clinical performance. Therefore, it can be concluded that knowledge is a crucial component in fostering professional and responsible nursing work attitudes. Hospitals should ensure that knowledge enhancement efforts are not solely focused on information acquisition, but also on strengthening conceptual and practical understanding that supports compliance with and quality implementation of EWS.

In this study, nurses' work attitudes were generally in the high category, indicating that most nurses demonstrate a positive orientation in carrying out nursing tasks, particularly in relation to implementing EWS. This positive work attitude reflects commitment, responsibility, and professional awareness in delivering safe and effective patient care. The conative dimension received the highest index score, especially for the statement, "I always take the initiative to carry out my duties without needing constant supervision from my superiors." This finding shows that many nurses adopt a proactive work attitude, taking initiative and demonstrating independence in their duties, which is a key indicator of a mature and professional work culture.

In contrast, the cognitive dimension received the lowest index score. Specifically, the statement, "I believe that adhering to work procedures such as EWS is important for patient safety," revealed that some nurses may not fully understand or believe in the importance of EWS as part of patient safety efforts. This lack of cognitive understanding may hinder the development of full compliance and commitment to consistent EWS implementation. Work attitudes consist of three main components: affective (feelings toward the job), cognitive (beliefs about the job), and conative (behavioral tendencies toward the job). These components collectively shape how nurses perceive their professional responsibilities. Similarly notes that work attitudes reflect how employees respond to their responsibilities, which directly correlates with work performance outcomes. Furthermore, [8] emphasized that individuals are more likely to comply with orders or procedures when they recognize the legitimacy, importance, and moral value of those rules. In the hospital context, EWS is a system legitimized both organizationally and professionally. Therefore, nurses with positive work attitudes are more likely to view EWS implementation as an ethical and professional duty to safeguard patient safety, rather than as a mere administrative obligation. Based on these theoretical perspectives, it can be concluded that work attitude serves as a psychological bridge linking knowledge to professional behavior. A positive attitude enhances nurses' intrinsic motivation to adhere to procedures such as EWS and acts as an effective mediator in fostering a strong patient safety culture within hospitals.

3.2.6 The Effect of Supervisory Techniques on Work Attitude

The study findings indicate that supervisory techniques have a significant influence on nurses' work attitudes. This underscores that the more optimally supervisors carry out their supervisory functions, the more positive the nurses' work attitudes become. Effective supervision not only improves compliance with established procedures but also fosters a responsible, enthusiastic, and proactive work attitude—particularly in implementing patient safety systems such as the Early Warning Score (EWS). Based on the analysis using the Three-Box method, the average index score for the supervisory techniques variable was classified as high. This suggests that nurses at Annisa Hospital Cikarang perceive their head nurses or supervisors as actively engaging in coaching, monitoring, and providing feedback related to EWS implementation. The highest score was recorded in the coaching and mentoring dimension, especially for the statement, "My supervisor guides or provides examples in the practical application of EWS." However, the lowest score was found in the corrective action dimension, indicating limited managerial support in performance improvement. Within the coaching dimension, the statement with the lowest score was, "My supervisor encourages continuous improvement in EWS implementation," reflecting that some nurses have not fully experienced sustained motivation, guidance,

or mentoring from their supervisors to enhance the quality of EWS application. This lack of encouragement for regular evaluation and improvement may hinder the system's effectiveness in safeguarding patient safety.

Meanwhile, the work attitude variable also demonstrated an average index score within the high category. This means that most nurses held a positive outlook toward carrying out their responsibilities in implementing EWS. The highest score appeared in the conative dimension, particularly for the statement, "I always take the initiative to perform my duties without constant supervision from my superior," indicating high responsibility and initiative among nurses, independent of direct oversight. However, the lowest score emerged in the cognitive dimension, revealing gaps in nurses' understanding of the objectives, benefits, or detailed procedures of EWS. The statement, "I believe that adhering to work procedures such as EWS is important for patient safety," reflected the lower belief among some nurses that compliance with EWS directly impacts patient safety.

Theoretically, the relationship between supervisory techniques and work attitude aligns with motivation and organizational behavior theory, as discussed who emphasizes that social support and leadership are key factors in shaping work attitudes. Supervisory techniques encompassing direction, monitoring, coaching, evaluation, and corrective actions create positive work experiences, enhance the sense of being valued, and strengthen nurses' professional awareness. When nurses feel supported and guided by their supervisors, they are more likely to develop a positive attitude toward their work, accompanied by a sense of ownership, commitment, and willingness to work ethically and professionally.

Additional theoretical support comes from who explain that managerial techniques such as coaching, feedback provision, and evaluation can shape nurses' perceptions of their work and organization, directly influencing their work attitudes. Further stresses that leadership styles and supervisory methods applied by nurse managers can shape staff attitudes both directly and indirectly. Supportive supervision has been shown to enhance motivation, commitment, and professionalism among nursing staff. Several empirical studies reinforce these findings. [10] reported that consistent supervisory support improves nurses' professional attitudes. Similarly, [28] found that clinical supervision impacts not only technical competencies but also work attitudes and work ethics. In Malaysia demonstrated that the quality of nursing supervision has a significant relationship with nurses' work attitudes, including discipline, initiative, and work ethics. Communicative and participatory supervisory styles increase confidence and foster a positive perception of the organization, ultimately strengthening professional work attitudes.

3.2.7 The Influence of Knowledge on Compliance with the Implementation of the Early Warning Score with Work Attitude as an Intervening Variable

The findings indicate that knowledge has a significant influence on nurses' compliance in implementing the Early Warning Score (EWS), both directly and through the mediation of work attitude. High levels of knowledge not only enhance compliance but also foster a positive work attitude that reinforces compliant behavior. Although most nurses understand the EWS procedures, their comprehension of the underlying objectives of EWS remains suboptimal. Nurses' work attitudes were generally high, particularly in the conative aspect (initiative), but the cognitive aspect still requires improvement, especially in terms of understanding the importance of EWS for patient safety.

Nurse compliance was also relatively high, especially in performing procedures according to standard operating procedures (SOPs), yet the aspect of professional responsibility remains a challenge. This highlights the need for continuous training and socialization regarding the nurse's role in the early detection of critical conditions through EWS. These findings are consistent with existing theories and prior research emphasizing that the combination of knowledge, attitude, and supervision plays a crucial role in shaping compliance behavior toward EWS. Therefore increasing knowledge should be accompanied by fostering a professional work attitude to ensure optimal EWS implementation.

Furthermore, the study concludes that professionally and constructively conducted supervisory techniques play an essential role in shaping nurses' positive perceptions of their work. This approach not only enhances confidence and commitment but also promotes values such as responsibility, discipline, and work ethics. Hospitals should therefore strengthen the leadership capacity of head nurses or supervisors through clinical management training and ensure that supervisory processes incorporate educational and motivational components, not merely administrative oversight. Such an approach will support the development of a work attitude conducive to the effective and sustainable implementation of EWS.

3.2.8 The Influence of Supervisory Techniques on Compliance with the Implementation of the Early Warning Score with Work Attitude as an Intervening Variable

This study demonstrates that supervisory techniques have a significant effect on nurses' compliance with the implementation of the Early Warning Score (EWS), both directly and through the mediation of work attitude. In other words, work attitude functions as a partial mediator that strengthens the relationship between supervisory techniques and compliance with EWS. Effective supervision not only encourages compliance but also fosters a positive attitude toward task execution.

Based on the three-box method analysis, nurses at Annisa Hospital Cikarang perceived supervisory techniques to be at a high level. This indicates that head nurses actively engage in coaching, monitoring, and providing feedback. The coaching dimension received the highest score, particularly for the statement that supervisors provide role-model practices in EWS implementation. However, support in the areas of corrective action and sustained motivation for continuous improvement was perceived as lacking. This suggests that supervisory efforts in driving evaluation and quality improvement remain suboptimal, despite their critical importance for the effectiveness of the EWS system.

Nurses' work attitudes were also rated as high, especially in the conative dimension, indicating strong initiative and responsibility in implementing EWS without relying on direct supervision. However, the cognitive dimension scored lower, suggesting that some nurses have not fully understood the importance of EWS procedures for patient safety. Nurse compliance with EWS was also found to be high, as evidenced by adherence to SOPs, accurate vital sign documentation, timely reporting of patient conditions, and appropriate interventions based on EWS scores. Nevertheless, the professional responsibility dimension showed weaknesses, indicating the need for hospitals to strengthen education and training regarding the nurse's role in early detection and patient safety.

These findings align with the theories of [14] and [36], which assert that professional supervision goes beyond oversight and plays a role in creating a supportive work environment that fosters positive attitudes. Social support from supervisors has been shown to influence both attitudes and work behaviors. When supervision is conducted in an educational and consistent manner, it shapes positive perceptions of the job and encourages responsibility and compliance. In this context, work attitude encompasses responsibility, self-confidence, and awareness of the importance of accurate documentation and reporting. This is supported by [37], who emphasize that effective supervision shapes work attitudes that drive compliance with clinical guidelines such as EWS.

Several other empirical studies reinforce these findings. Research by [19], [28], and [20] found that effective supervisory styles and well-structured training can enhance nurse compliance by strengthening work attitudes. Overall, work attitude serves as a crucial link in reinforcing the effect of supervisory techniques on compliance. Effective supervision fosters initiative, adherence to procedures, and commitment to service quality. Therefore, hospital management should view supervision not merely as an administrative control tool but as a developmental mechanism to drive positive changes in work

attitudes and behaviors. Training for head nurses in educational, supportive, and continuous supervision is essential to build a professional work culture focused on patient safety

4. CONCLUSION

This study concludes that supervisory techniques have both a significant direct and indirect effect on nurses' compliance with the implementation of the Early Warning Score (EWS) at Annisa Hospital, Cikarang. Consistent, educational, and supportive supervision has been proven to enhance nurses' adherence to EWS procedures.

Furthermore, work attitude serves as a partial mediating variable that strengthens the relationship between supervisory techniques and compliance with EWS implementation. Effective supervision fosters positive work attitudes, such as responsibility, initiative, and awareness of the importance of early detection of patient conditions.

These findings highlight that effective EWS implementation depends not only on standard operating procedures but also on managerial approaches through supervision and the development of professional work attitudes. Therefore, hospitals should ensure that ward managers possess strong supervisory competencies, not only in administrative oversight but also in.

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