



Research Article

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The Relationship between Decision-Making Style and Self-Efficacy among Nurses: Cross-Sectional Study

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Abstract

Background: In professional nursing practice, decision-making style and self-efficacy are important elements that directly impact patient safety, care equality, and healthcare outcomes. **Objective:** To examine the relationship between decision-making styles and self-efficacy among nurses in Jordanian hospitals. **Methods:** A cross-sectional design was used. A convenience sample of 150 nurses was recruited from Jordanian private and governmental hospitals in the central region of Jordan (Amman, Zarqa, and Balqa). The General Self-Efficacy Scale and the Nursing Decision-Making Instrument were used to gather data. **Results:** 88.7% were categorized as intuitively oriented decision makers, and the overall mean score of nurses' decision-making styles was high ($M=3.74/5$). Nurses scored highest in the areas of documenting, anticipating the results of nursing interventions, and conducting structured patient evaluations. Additionally, there was a high level of self-efficacy ($M=3.36/4$), especially in problem-solving skills and handling clinical problems. Self-efficacy and decision-making styles showed a positive correlation ($r=0.412$, $p<0.001$). Significant differences in self-efficacy and decision-making styles were found based on age, years of experience, job title, and educational level. Significantly higher scores were reported in older nurses holding postgraduate degrees, more experienced, and having administrative positions. Nurses' decision-making styles were significantly predicted by years of experience ($\beta=0.24$, $p=0.021$) and self-efficacy ($\beta=0.34$, $p<0.001$). **Conclusions:** To improve nurses' confidence, clinical reasoning, and decision-making skills, healthcare organizations should encourage continuous professional development, mentorship, and support structural training programs, which ultimately will improve patient care quality and healthcare outcomes.

Keywords: Decision-making style; Hospitals; Jordan; Nurses; Self-efficacy.

العلاقة بين أسلوب اتخاذ القرار والكفاءة الذاتية بين الممرضين: دراسة مقطعية

الخلاصة

الخلفية: في ممارسة مهنة التمريض، يعد أسلوب اتخاذ القرار والكفاءة الذاتية عنصرين مهمين يؤثران مباشرة على سلامة المرضى، ومساواة الرعاية، ونتائج الرعاية الصحية. **الهدف:** دراسة العلاقة بين أساليب اتخاذ القرار والكفاءة الذاتية بين الممرضين في المستشفيات الأردنية. **الطرائق:** تم استخدام تصميم مقطع عرضي. تم استقطاب عينة من 150 ممرضاً من مستشفيات خاصة وحكومية أردنية في وسط الأردن (عمان، الزرقا، والبلقاء). تم استخدام مقياس الكفاءة الذاتية العامة وأداة اتخاذ القرار التمريضية لجمع البيانات. **النتائج:** تم تصنيف 88.7% كصناع قرار يتوجهون بشكل حدسي، وكان متوسط الدرجة العامة لأساليب اتخاذ القرار لدى الممرضين مرتفعاً ($M=3.74/5$). حصل الممرضون على أعلى الدرجات في مجالات التوثيق، وتوقع نتائج التدخلات التمريضية، وإجراء تقييمات منظمة للمرضى. بالإضافة إلى ذلك، كان هناك مستوى عال من الكفاءة الذاتية ($M=3.36/4$)، خاصة في مهارات حل المشكلات والتعامل مع المشكلات السريرية. أظهرت الكفاءة الذاتية وأساليب اتخاذ القرار مرتبطة إيجابياً ($r=0.412$, $p<0.001$). تم العثور على فروق كبيرة في الكفاءة الذاتية وأساليب اتخاذ القرار بناءً على العمر وسنوات الخبرة والمسمى الوظيفي والمستوى التعليمي. تم الإبلاغ عن درجات أعلى بكثير لدى الممرضين الأكبر سناً الحاصلين على درجات دراسات عليا، والأكثر خبرة، وذوي المناصب الإدارية. تم التنبؤ بأساليب اتخاذ القرار لدى الممرضين بشكل كبير من خلال سنوات الخبرة ($\beta=0.24$, $p=0.021$) والكفاءة الذاتية ($\beta=0.34$, $p<0.001$). **الاستنتاجات:** لتحسين ثقة الممرضين والتفكير السريري ومهارات اتخاذ القرار، يجب على منظمات الرعاية الصحية تشجيع التطوير المهني المستمر، والإرشاد، ودعم برامج التدريب الهيكلي، التي ستحسن في النهاية جودة رعاية المرضى ونتائجهم الصحية.

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INTRODUCTION

Decision-making is viewed as one of the most essential competencies in nursing practice. Patient safety, service quality, decreased medical errors, and improved healthcare outcomes are all greatly influenced by effective decision-making [1]. Depending on their cognitive, psychological, and professional traits, nurses have different decision-making styles, which can affect their performance, self-assurance, and ability to respond effectively in clinical situations. Rational, intuitive, dependent, avoidant, and spontaneous methods are examples of decision-making styles that can have varying effects on nursing practice [2]. Decision-making style and

clinical decision-making competence are related yet conceptually distinct constructs. Clinical decision-making competence includes the ability to evaluate patient information, use clinical knowledge, and make safe and appropriate clinical decisions when caring for patients. In contrast, decision-making style refers to an individual's habitual cognitive and behavioral approach to decision-making, such as employing rational, intuitive, dependent, avoidant, or spontaneous approaches [2]. Whereas competence assesses the quality and effectiveness of clinical judgment, decision-making style characterizes the typical approach to decision-making. Comprehending nurses' favored decision-making styles may provide further understanding of psychological factors, such

as self-efficacy, that affect professional performance and clinical practice. According to Bandura's social cognitive theory, self-efficacy is a person's confidence in their ability to carry out tasks and achieve desired goals [3]. Self-efficacy is fundamental for improving confidence, clinical competence, problem-solving, and decision-making skills, and professional autonomy in nursing. Higher levels of self-efficacy among nurses are correlated with improved clinical judgment, more resilience, and better adaptation to difficult healthcare conditions. In contrast, low self-efficacy can have a negative impact on nurses' confidence and competency to make decisions, which accordingly results in hesitancy, stress, and lower quality healthcare services [4]. Allari *et al.* (2020) and Allari *et al.* (2022) emphasized the importance of self-efficacy in nursing. It was found that caring behaviors and a positive educational environment have a significant influence on self-efficacy and professionalism among nursing students [5,6]. The studies recommended that students who receive more care and support become more confident about their competence in carrying out nursing tasks. Although these studies were on nursing students, they shed light on the importance of self-efficacy in professional performance, which may influence the decision-making competency of nurses as well. Globally, technological developments, increased patient awareness, shortages in healthcare task forces, and expanding nursing responsibilities have all contributed to the complexity of healthcare systems [7]. Therefore, scholars are increasingly interested in exploring the clinical factors influencing nurses' clinical decision-making competencies and the psychological factors that shape how nurses approach decisions, including their decision-making styles and professional performance. Nurses' clinical decision-making competencies are correlated with psychological and professional traits, such as self-efficacy, emotional intelligence, and professional self-concept, according to recent international studies. For instance, a recent study of operating room nurses found a strong positive correlation between clinical decision-making level and self-efficacy, suggesting that nurses who felt more confident in their competencies made better decisions [4]. A similar study emphasized the significance of psychological empowerment in nursing practice, showing that nurses' professional self-concept strongly impacted their clinical decision-making performance [8]. Nurses in the Arab countries face significant challenges caused by high workloads, nursing shortages, limited resources, and rapidly shifting healthcare demands. These challenges may influence nurses' perception of self-efficacy and decision-making styles [9]. Recent regional studies have pointed out the importance of cognitive and psychological factors in improving nursing performance. In one study in Palestine, results showed clinical decision-making and self-efficacy among nursing students were significantly and positively correlated, suggesting that higher confidence is linked to more effective decision-making [10]. Additionally, a study in the Middle East found that professional

functioning and innovation among nursing managers in healthcare organizations were strongly influenced by prevailing decision-making styles [2]. These results underline the rising need to examine nurses' decision-making styles and self-efficacy in Arab healthcare environments, which face significant challenges [9]. Nurses in Jordan comprise the largest group of healthcare providers and are important to delivering patient-centered care throughout multiple healthcare sectors. These nurses often work in demanding clinical settings that impose rapid decision-making and a high degree of professional confidence. Although decision-making and self-efficacy are widely recognized as essential competencies in nursing practice, most current Jordanian studies have primarily examined clinical decision-making competence or performance in relation to self-efficacy and other psychological or professional factors. For instance, previous studies have explored associations between emotional intelligence, self-efficacy, nursing informatics competencies, and clinical decision-making among Jordanian nurses [11,12]. However, these investigations have concentrated on nurses' ability to make effective clinical decisions rather than underlying decision-making styles. As a result, limited evidence exists regarding the relationship between nurses' preferred decision-making styles and self-efficacy within the Jordanian context. For example, a recent study in Jordan identified a significant association between emotional intelligence, self-efficacy, and clinical decision-making among critical care nurses, suggesting that higher self-efficacy correlates with improved decision-making competencies [11]. Another study revealed a positive correlation between nursing informatics competencies and clinical decision-making performance [12]. Furthermore, a study involving Jordanian nursing students demonstrated that educational interventions such as concept mapping enhanced both clinical decision-making and self-directed learning [13]. Many studies also explored the relationship between demographic factors and decision-making styles among nurses. It was found that factors such as age, education, years of experience, management role, and professional education have a significant impact on the decision-making style that a nurse chooses to adopt. Older nurses with more years of experience tended to use rational and intuitive decision-making styles because they had a lot of clinical experience and were professional. On the other hand, nurses with less experience tended to use dependent or avoidant styles to make decisions. Higher levels of education also contribute to better critical thinking and evidence-based decision-making skills [14,15]. While prior studies in Jordan have examined clinical decision-making competence and self-efficacy, emotional intelligence, educational intervention, and informatics competencies, no study, to our knowledge, has specifically assessed the relationship between nurses' decision-making styles and self-efficacy. Investigating this relationship is essential as nurses' preferred decision-making styles may directly

influence their self-efficacy, clinical judgment, clinical competence, and professional performance. Additionally, clarifying these relationships and identifying demographic differences could enable healthcare administrators, nursing educators, and policymakers to design targeted educational and managerial interventions that enhance nurses' self-efficacy and foster effective decision-making practices. Therefore, this study aims to examine the relationship between decision-making styles and self-efficacy among nurses in Jordanian hospitals and to test the differences in nurse decision-making styles and self-efficacy levels based on demographic factors.

METHODS

Study design and setting

A descriptive correlational cross-sectional study design was used to develop static representations of variables and establish correlations between them [16]. This study is also cross-sectional, which is recognized for its cost-effectiveness and time efficiency compared to other research methods, as it captures data at a specific point, and a correlational design allows for the examination of the relationship between the study variables, as outlined by Grujicic & Nikolic (2021) [17]. The healthcare industry in Jordan is well developed, and according to the World Bank, Jordan is the leading healthcare service provider in the region and among the top five countries globally. The healthcare sector in Jordan is categorized into public and private and university-affiliated hospitals [18]. This study was conducted in selected government and private hospitals in the central region of Jordan (Amman, Zarqa, and Balqa). A multicenter method was utilized to ensure the validity and generalizability of the results through diversity of settings and participants [19]. In this study, six hospitals were conveniently selected, with three from the government sector and three from the private sector.

Sample selection

A convenience sampling method was used to recruit nurses from selected hospitals. An equal number of nurses was recruited from each sector, across departments and shifts, to ensure sample diversity and representativeness. Sample size was calculated using G Power version 3.1.9.7 for Pearson correlation analysis, with a medium effect size of 0.30, an alpha level of 0.05, a statistical power of 0.80, and a two-tailed test. The calculated sample size was 84 participants. However, to improve the generalizability of the results, address non-responses and missing data, and compensate for possible incomplete questionnaires and non-response, approximately 150 participants were recruited.

Inclusion criteria

The inclusion criteria included full-time nurses working in governmental or private hospitals and having at least 6 months of clinical experience.

Exclusion criteria

Nurses on annual leave, nursing students, and intern nurses were excluded from the study.

Instrument

This study includes an Arabic paper-based questionnaire that includes three sections. Demographic characteristics that include age, gender, marital status, educational level, years of experience in the nursing profession, job title, and department. The Nursing Decision-Making Instrument (NDMI) includes a 24-item questionnaire designed to assess the cognitive processes that nurses use in clinical situations. The instrument is an abbreviated version of the original 56-item tool developed by Lauri and Salantera (2002) [20]. Based on Hammond's Cognitive Continuum Theory (CCT) (2000) [21], the NDMI classifies decision-making along a continuum from analytical (systematic to intuitive) interpretive models. The instrument comprises four subscales, each corresponding to a stage in the decision-making process: data collection, data processing and problem identification, planning actions, and implementation and evaluation. Each item is rated on a 5-point Likert scale from "Almost never" (1) to "Almost always" (5). The total scores were between 24 and 120, and lower scores (24–67) meant that the decision-making was analytical and systematic. Reverse coding was selectively applied to five items from the Nurse Decision-Making Instrument (specifically items 2, 4, 5, 14, and 19), with the scoring scale inverted. The overall score is interpreted as follows: (a) Less than or equal to 67 points suggests an analytically oriented decision-making style; (b) Between 68 and 78 points suggests a flexible decision-making style, where the nurse applies both analytical and intuitive methods depending on the situation; and (c) Greater than 78 points suggests an intuitively oriented decision-making style [20]. Previous studies have reported high internal consistency for the instrument, with a Cronbach's alpha of 0.863 in clinical hospital settings [22]. The General Self-Efficacy Scale (GSE), which is a 10-item self-report, was used to assess participants' perception of their abilities to respond to and manage environmental demands and challenges. The GSE was developed by Schwarzer and Jerusalem (1995) [23]. A 4-point Likert scale ranged from "Not at all true" (1) to "Exactly true" (4). Higher scores indicate more positive self-efficacy perception. The overall score, which ranges between 10 and 40, is the sum of all the items. Reliability of the tool was reported as reliable in previous studies with Cronbach's alphas between 0.76 and 1.90; the GSE is well-known for its strong internal consistency [23,24].

Translation, validity, and reliability

The translation method of this study instrument was done from English to Arabic following a precise forward-backward translation technique, guaranteeing conceptual parity and linguistic precision in the target language [25]. The questionnaire was translated into

Arabic by two native Arabic speakers who are skilled in English and have experience in healthcare. The forward translation was developed to create an Arabic version of the questionnaire. The experts ensured that the tools' items remained complete and were culturally appropriate for Jordanian healthcare settings. The original Arabic version was then translated back into English by two multilingual experts who were not part of the first translation process. After the text was translated back to its original language, a committee was formed to conduct a review. Face validity of the translated questionnaire was established by a panel of Jordanian nursing experts proficient in Arabic and experienced in Jordanian healthcare settings. The panel evaluated whether the instrument's questions adequately covered the decision-making styles and self-efficacy constructs and whether they were comprehensible. All items were assessed for clarity, relevance, and cultural appropriateness. The panel's feedback led to necessary modifications in the questionnaire, ensuring that it effectively connects with the target group and is perceived as relevant and easy to understand. A pilot study was conducted with 10% of the total study participants ($n=15$) working in hospitals in Jordan. These participants met the inclusion criteria but were excluded from the main analysis to prevent potential bias. This process enhanced the questionnaire's clarity and suitability for the target population, thereby improving its overall validity. The reliability analysis conducted during the pilot study demonstrated acceptable internal consistency across all subscales of the questionnaire. Cronbach's alpha values were 0.79 for GSE and 0.89 for NDMI, indicating that the instruments reliably measure the intended constructs.

Data collection process

The data collection lasted for four weeks, from April 23 to May 20, 2026. During this period, each selected hospital was visited twice to facilitate participation and ensure the study's smooth progression. To maximize participation and accommodate participant preferences, a paper-based survey format was made available. The researcher distributed the surveys in person, accompanied by detailed instructions for completion and a consent form. Nurses were encouraged to complete the surveys during their breaks or after their shifts to minimize disruption to patient care. An allocated area, such as the nurse's room, was identified in each hospital as the preferred quiet space for completing the surveys. To adjust varying schedules, participants were given a maximum of three days to complete the survey. Those unable to complete it during work hours were allowed to take the survey home and return it within the specified timeframe. A secure collection box was placed in the allocated area, ensuring the confidentiality of completed surveys until collection. The researcher revisited each hospital three days after the initial distribution to collect the surveys and gently remind participants who had not yet completed them.

Ethical considerations

Approval was obtained from the Institutional Review Board of the University/Faculty of Nursing (IRB approval # MM: 21/4/2025-2026). Once the IRB granted clearance, letters were sent to the MOH and selected private hospitals in Jordan. The letters included a comprehensive explanation of the study's objectives, its potential impact on improving nursing practice, and guarantees of compliance with ethical guidelines. After receiving authorization from the selected hospitals, the process of recruiting started. Informed consent was a fundamental aspect, ensuring that all nurses voluntarily agreed to participate in the study after fully understanding its aim and advantages. Participants were notified that their participation was completely voluntary, and their responses would be treated with confidentiality and anonymity. Anonymity was preserved by using specific codes instead of personal identifiers, and participants were informed of their right to withdraw from the research at any point without any penalties. Security measures were implemented to safeguard the data, such as storing the paper surveys in a locked cabinet and securing digital data on password-protected computers accessible only to the study team. All instruments used in the study were publicly available online and only used for research purposes.

Statistical analysis

Data analysis was done using SPSS version 26 [26]. Once the data were fully entered, the dataset underwent a thorough cleaning process to address any inconsistencies, missing values, or outliers. The dataset was tested for normality using statistical measures such as the Shapiro-Wilk test and visual inspection of histograms and Q-Q plots. The results indicated that the data were normally distributed. Accordingly, parametric tests were utilized. Descriptive statistics, including frequencies, means, and standard deviations, were applied to describe the characteristics of the study participants and address the first two research questions: (1 and 2) What is the perception of decision-making styles among nurses in Jordanian hospitals? And what is the level of self-efficacy among nurses in Jordanian hospitals? To address the third research question, "Is there a significant relationship between nurses' decision-making styles and self-efficacy among nurses in Jordanian hospitals?" Pearson correlation was used to assess the relationship between decision-making style and self-efficacy. To answer question 4, "Are there any differences in nurses' decision-making styles and self-efficacy based on demographic characteristics?" a dependent t-test and one-way ANOVA were used. Post hoc comparisons were used as needed to identify specific group differences. Multiple linear regression analysis was conducted to identify the predictors of decision-making style in order to answer question 5. Before conducting multiple linear regression analysis, the underlying assumption was tested using tolerance values and variance inflation factor (VIF), with tolerance > 0.01 and VIF < 10 , which indicates

no multicollinearity. As a result, the diagnostic analysis confirmed that the assumptions of multiple regression were satisfied. All statistical tests were done with a significance level of < 0.05 .

RESULTS

Table 1 presents the demographics and work-related characteristics of study participants. A total of 150 participants This study included 150 participants, who had a mean age of 35.6 ± 5.7 years. Female participants represented the majority (87.3%). In addition, 63.3% were single. In terms of education levels, almost two-thirds (66.7%) had a bachelor's degree. The results revealed that staff nurses constituted 68.7% of the sample, and administrative staff nurses constituted 31.3%. 48.7% of participants were from the private sector, and 51.3% were from the government. 21.4% of the participants were from medical and surgical departments, 10.6% from critical care units, 7.3% from emergency departments, 22.7% from OB/GYN and neonatal units, 10.0% from pediatrics, and 28.0% from other departments. The mean length of professional nursing experience was 12.4 ± 6.9 years. Table 2 presents the results of the nurse's decision-making style items. Analysis of the NDMI revealed that the three highest mean scores were for the items "I document the general directions concerning the patient's care in the patient's records without difficulties" (4.32 ± 0.79) and "I anticipate the impacts of nursing interventions on the patient" (4.30 ± 0.66). These findings suggest that nurses prioritize the strong structure, implementation, and documentation of the decision-making process. On the other hand, the two lowest mean scores were observed for the items "I follow as closely as possible the patient's existing nursing plan for his/her disease and

situation" (1.61 ± 0.75) and "I make assumptions about forthcoming nursing problems during the first contact with the patient." (2.05 ± 0.85). These results indicate that nurses in Jordan avoid relying solely on unsupported personal interpretation and prefer systematic, structured, clinical protocols that depend on evidence-based practice.

Table 1: Demographic Characteristics of participants (n=150)

Characteristics	Result
Gender	
Female	131(87.3)
Male	19(12.7)
Marital status	
Single	95(63.3)
Married	46(30.7)
Divorced	7(4.7)
Widowed	2(1.3)
Educational level	
Diploma	23(15.3)
Bachelor's degree	100(66.7)
Postgraduate	27(18)
Job title	
Staff nurse	103(68.7)
Administrative (Charge nurse, Head nurse, Nurse manager, Supervisor)	47(31.3)
Sector	
Private	73(48.7)
Governmental	77(51.3)
Department	
Medical and Surgical	32(21.4)
Critical care	16(10.6)
Emergency	11(7.3)
OB/GYN & Neonatal	34(22.7)
Pediatrics	15(10)
Other Departments	42(28)
Age	35.6 ± 5.7
Years of professional nursing experience	12.4 ± 6.9

Values are presented as frequency, percentage, and mean $\pm$ SD.

The total mean score of decision-making was 89.73 ± 8.41 . Moreover, participants' decision-making scores were described in terms of decision-making styles.

Table 2: Nurse decision-making styles items results (n=150)

Item	Result
1. I collect as much advanced information as possible from the patient's records	4.25 ± 0.89
2. I rely on my own interpretations when it comes to defining the patient's condition*	2.91 ± 1.23
3. On the basis of my advance information, I specify all the items I intend to monitor and ask the patient about	4.25 ± 0.89
4. I make assumptions about forthcoming nursing problems during the first contact with the patient*	2.05 ± 0.85
5. I confirm the impression I have formed on the basis of advance information by seeking symptoms that support my views*	2.2 ± 0.86
6. It is easy for me to make a distinction between relevant and irrelevant information in defining the patient's condition	4.29 ± 0.82
7. I compare the information I have received about the patient with my earlier knowledge of similar individual patients' cases	3.8 ± 0.97
8. I compare the information I have received about the patient with my own experiences in nursing practice	4.19 ± 0.75
9. I compare the information I have received about the patient with research knowledge about the nursing care and its impacts	4.08 ± 0.94
10. It is easy for me to see, even without closer analysis, which pieces of information are relevant to defining the patient's nursing problems	3.76 ± 0.98
11. I define the patient's nursing problems objectively on the basis of the symptoms and complaints observed	3.97 ± 0.8
12. It is easy for me to form an overall picture of the patient's situation and major nursing problems	3.93 ± 0.79
13. I drew up the patient's nursing plan according to the stages of the nursing decision-making process	4.24 ± 0.69
14. I base the patient's nursing plan on my own nursing views and/or the patient's views on his/her care*	2.81 ± 1.25
15. I base the patient's nursing plan on the general regimes prescribed for the patient's disease	4.17 ± 0.79
16. I document without difficulties the general directions concerning the patient's care to the patient's records	4.32 ± 0.79
17. I set out targets for the patient's care that are easy to measure	4.23 ± 0.71
18. I anticipate the impacts of nursing interventions on the patient	4.3 ± 0.66
19. I follow as closely as possible the patient's existing nursing plan for his/her disease and situation*	1.61 ± 0.75
20. I anticipate changes in the patient's condition on the basis of individual cues even before there are any clear symptoms	3.79 ± 0.87
21. I use specific information about the treatment of the patient's disease when making decisions about nursing care	4.09 ± 0.81
22. I flexibly change my line of action on the basis of feedback on the patient's situation	4.23 ± 0.8
23. I try to find reasons for my own observations of changes in the patient's condition	4.24 ± 0.83
24. It is easy for me to assess the impact of my actions on the patient's condition	4.16 ± 0.87
Total mean score nurse decision-making (Average M=3.74 out of 5)	89.73 ± 8.41

Values are presented as mean $\pm$ SD.

Table 3 shows that 88.7% of nurses used intuitive decision-making, compared with 10.6% who used flexible decision-making and 0.70% who used analytical decision-making. Table 4 shows that the overall mean score of GSE is 3.36 ± 0.61 , indicating a high self-efficacy level among nurses. The nurses showed the highest self-efficacy level on item 6, "I can solve most problems if I invest the necessary effort."

Table 4: The levels of self-efficacy (n=150)

Item	Result
1. I can always manage to solve difficult problems if I try hard enough	3.4±0.57
2. If someone opposes me, I can find the means and ways to get what I want.	3.11±0.73
3. It is easy for me to stick to my aims and accomplish my goals.	3.39±0.61
4. I am confident that I could deal efficiently with unexpected events.	3.34±0.61
5. Thanks to my resourcefulness, I know how to handle unforeseen situations.	3.33±0.63
6. I can solve most problems if I invest the necessary effort.	3.43±0.64
7. I can remain calm when facing difficulties because I can rely on my coping abilities.	3.33±0.66
8. When I am confronted with a problem, I can usually find several solutions.	3.38±0.62
9. If I am in trouble, I can usually think of a solution	3.41±0.62
10. I can usually handle whatever comes my way.	3.43±0.56
Overall mean score	3.36±0.61

Values are presented as mean±SD.

This indicates a robust internal locus of control and notable problem-solving skills among nurses in their clinical role. However, the lowest mean score was for item 2, "If someone opposes me, I can identify the means and ways to obtain what I want" (3.11 ± 0.73), indicating that nurses experience a slightly greater resistance or lower resilience in dealing with interpersonal conflicts in the workplace than in direct clinical problem-solving situations. Pearson correlation was used to test the correlation between decision-making style and self-efficacy, and the result

(3.43 ± 0.64), and item 10, "I can usually handle whatever comes my way" (3.43 ± 0.56).

Table 3: The nurse decision-making styles (n=150)

Type	n(%)
Analytically Oriented (score <68)	1(0.70)
Flexible Oriented (score 68 -78)	16(10.6)
Intuitively Oriented (score >78)	133(88.7)

showed a statistically significant positive correlation between variables, $r(148) = 0.412$, $p > 0.001$. The coefficient of determination ($r^2 = 0.170$) suggests that 17% of the variance in nursing decision-making styles is shared with their perception of self-efficacy. Table 5 presents the differences in decision-making styles and self-efficacy using the total NDMI score based on demographics. No statistical differences were observed based on gender, sector, department, or job title.

Table 5: Differences in nurses' decision-making styles and self-efficacy based on demographic characteristics

Demographic Variables	Category	Decision-making styles	p-value	Self-efficacy	p-value
Gender	Female	88.15±7.04	0.09 ^t	28.86±5.07	0.414 ^t
	Male	91.31±6.4		29.53±4.80	
Hospital sector	Private	91.6±6.18	0.089 ^t	29.97±4.58	0.110 ^t
	Governmental	87.86±7.11		28.64±5.12	
Educational level	Diploma	87.85±5.61	0.035 ^F	26.51±3.93	0.015 ^F
	Bachelor's	89.12±6.91		28.61±4.93	
	Postgraduate	92.23±6.12		30.91±4.65	
Age	Under 30 years	87.82±6.81	0.001 ^F	27.91±5.11	0.020 ^F
	30-39 years	91.31±6.22		29.74±4.52	
	40 years and above	90.25±5.94		31.04±6.68	
Department	Medical and Surgical	88.75±7.03	0.434 ^F	28.52±5.14	0.310 ^F
	Critical care units and ER	91.58±6.34		29.85±4.51	
	OBGYN/Pediatrics and other departments	88.37±7.31		28.90±5.32	
Job title	Staff nurse	84.45±6.77	0.018 ^t	28.57±4.91	0.093 ^t
	Administrative (Charge nurse, Head nurse, Nurse manager, Supervisor)	94.92±6.11		30.16±4.64	
Years of experience (year)	<2	86.15±7.35	0.007 ^F	27.00±5.33	0.036 ^F
	2-5	90.3±6.28		29.10±4.60	
	>5	92.83±6.34		30.25±4.71	

Values are presented as mean±SD. ^t: t-test; ^F: ANOVA.

However, the ANOVA results for educational level revealed significant differences; nurses with postgraduate degrees showed higher decision-making proficiency (92.23 ± 6.12 ; $p = 0.035$) and higher self-efficacy than those with bachelor's and diploma levels (30.91 ± 4.65 ; $p = 0.015$). Moreover, based on years of experience, significant differences were also observed after conducting post-hoc comparisons using the Tukey HSD test, which confirmed that nurses with over 5 years of experience scored significantly higher in decision-making proficiency and self-efficacy than nurses with less than 2 years of experience ($p < 0.05$).

Age also has a significant effect on both decision-making ($p = 0.001$) and self-efficacy ($p = 0.02$). Post-hoc analysis indicated that nurses aged 40 and above reported higher decision-making proficiency and higher self-efficacy levels compared with those of younger ages. This indicates that longer exposure and years in the health and clinical field may foster decision-making skills and self-efficacy among nurses. Regarding job titles, results show nurses with administrative roles demonstrate higher decision-making proficiency ($p = 0.018$), but not in regard to self-efficacy, which suggests that leadership

responsibility may align with structured decision-making practices, but self-efficacy may stay disturbed. Table 6 presents the results of a multiple linear regression conducted to test predictors of decision-making styles and self-efficacy among participants. The combined predictors accounted for 23.1% of the variance in the decision-making score

($R^2 = 0.231$; Adjusted $R^2 = 0.210$), indicating a significant predictive framework ($p < 0.001$). When controlling alternative variables in the regression model, only two predictors emerged as significant, namely self-efficacy ($\beta = 0.34$, $p < 0.001$) and years of experience ($\beta = 0.24$, $p = 0.021$).

Table 6: Multiple linear regression results

Variable	Unstandardized β	SE	Standardized β	p -value
Constant	54.21	4.12	-	<0.001
Age (year)	0.08	0.09	0.09	0.375
Education level (Postgraduates)	1.15	1.18	0.08	0.334
Years of experience (year)	0.28	0.12	0.24	0.021
Self-efficacy	0.47	0.11	0.34	<0.001

$R = 0.481$; $R^2 = 0.231$; Adjusted $R^2 = 0.210$; $F(4, 146) = 10.82$. Education was dummy-coded (0: Diploma, 1: Bachelor's, 2: Postgraduate).

DISCUSSION

The current study assessed perceptions of decision-making styles and self-efficacy among nurses working in Jordanian hospitals, as well as the relationship between these variables. The results revealed that nurses mostly demonstrated an intuitive decision-making style. Hammond's Cognitive Theory [21] posits that quick identification of clinical patterns, cumulative experience, and repeated clinical exposure all contribute to the development of intuitive decision-making. This result may suggest that Jordanian nurses have extensive clinical expertise and are familiar with patient care situations. It also suggests that Jordanian nurses have extensive clinical experience and are familiar with patient-centered care. The results are in line with a previous study in Jordan on critical care nurses, which found that the intuitive style was the most popular among nurses working in intensive care units. According to Maharmeh *et al.* (2016) [27], experienced nurses were able to quickly identify clinical deterioration and had a high level of sensitivity to patients' verbal and non-verbal cues. Similarly, a multicenter study in Saudi Arabia showed the same results [28]. These similarities suggest that across the Middle East and the Gulf, nurses experience similar conditions, workload pressures, and clinical demands. Many factors can explain the intuitive decision-making style among nurses in this study. Nurses must make sound clinical decisions quickly, since Jordanian hospitals frequently encounter high patient acuity and staffing shortages. Furthermore, simulation-based learning and clinical training, which enhance pattern identification and experiential learning, are becoming a priority in nursing programs across public and private academic institutions in Jordan. In addition, these results may be because experienced nurses often acquire implicit knowledge that enables them to quickly recognize patients' issues without depending on analytical reasoning. While intuitive decision-making can increase productivity and efficiency when providing patient care, relying solely on intuition without analytical confirmation can sometimes raise the risk of bias or insufficient evaluation. As a result, healthcare institutions ought to promote balanced decision-making, including analytical, intuitive, and evidence-based styles. Programs for continuous professional development in

hospitals should emphasize critical thinking, clinical judgment, and reflective practice that may enhance nurse competencies to make sound decisions and ultimately improve patient outcomes. In addition, the participants rated highly the items related to documentation and anticipation of the results of the intervention. These results suggest that Jordanian nurses utilize clinical experience, knowledge, and the nursing process in their everyday decision-making practices. In this study, the items that scored the highest were those related to anticipation of the effect of nursing interventions and documentation of patients' care, which mirror the growing emphasis on patient safety, accountability, and evidence-based practice in healthcare settings in Jordan. Documentation is considered a vital intervention of professional nursing care because it fosters continuity of care, interprofessional communication, and legal accountability. In previous studies, similar results were revealed, demonstrating that experienced nurses are more likely to make quick, clinically sound decisions based on their practical experience gained over time and have a higher level of confidence in applying the nursing process and prediction of complications during nursing care [29-31]. The high mean scores related to comparing patients' information with clinical experiences and nurses' research knowledge suggest that nurses incorporate experiential learning and evidence-based practice into decision-making. This finding is consistent with a previous study conducted in Saudi Arabia, which reported that nurses with stronger evidence-based practice competencies are more likely to demonstrate more effective decision-making skills [32]. This may be related to continuous professional development efforts, hospital accreditation requirements, and increasing awareness of the benefits of evidence-based practice among nurses across healthcare settings in the regional countries. Furthermore, the experienced nurses were able to make clinical decisions faster and more efficiently due to their vast practical knowledge, advanced critical thinking skills, and confidence in predicting complications and applying the nursing process [33]. In the Jordanian context, Al-Qudah *et al.* (2025) showed that nurses with higher professional experience and informatics competencies were significantly associated with better clinical decision-making performance [12]. On the

other hand, the lowest scores were in items related to dependence on unsupported assumptions and in flexibility in previous nursing care plans. The findings imply that Jordanian nurses prefer to assess patients individually and to use adaptive clinical reasoning rather than assumptions. Such findings are considered positive because the reliance on unproven assumptions can increase clinical errors and negatively affect patients' care outcomes. Many international studies reported that nurses prefer a flexible and patient-centered style to decision-making rather than strict protocols [34]. The general self-efficacy score of nurses working in Jordanian hospitals was found to be reasonably high. This suggests that nurses have a high level of confidence in their competencies to manage difficult clinical situations, face unexpected circumstances, and continue to solve problems. Because it is linked to greater clinical performance, less burnout, and better patient care outcomes, high self-efficacy is an important psychological factor in nursing practice. According to Bandura's social cognitive theory (1999) [35], verbal persuasion, social modeling, mastery experiences, and emotional control all contribute to the development of self-efficacy. In Jordanian nursing practice, frequent exposure to clinical settings may enhance clinical self-efficacy by fostering mastery of experiences in patient care. However, the growth of interpersonal self-efficacy may be a barrier to fewer organized chances for conflict resolution and communication training. The highest mean scores were for items "I can solve most problems if I invest the necessary effort" and "I can usually handle whatever comes my way." These findings show that nurses have a strong internal locus of control and resilience, indicating that they think that hard work and perseverance are important factors in good outcomes. This result is in line with Bandura's (1999) explanation of self-efficacy, which highlighted that people with high self-efficacy are more likely to view barriers as manageable and persevere through challenging tasks [35]. Previous studies showed similar results with nurses exhibiting a high level of self-efficacy linked to improved job performance and more robust coping mechanisms in clinical settings [36, 37]. Similarly, a study conducted in Iran found that nurses who had higher levels of self-efficacy felt more capable of handling challenging patient care demands and adjusting to abrupt clinical changes [38]. On the other hand, the item "If someone opposes me, I can find the means and ways to get what I want." Had the lowest mean score in the current study, indicating comparatively less confidence in interpersonal assertiveness as opposed to clinical problem-solving skills. This result might be explained by organizational and cultural factors in Jordanian healthcare environments, where nurses' forceful interpersonal behavior may be constrained by hierarchical systems and deference to authority. Similar results were found in several other studies where nurses perceive less in task-oriented competencies than in assertiveness-related self-efficacy [39]. Similarly, a study conducted in Pakistan showed that nurses are more confident in their

technical clinical skills than in their ability to handle interpersonal conflicts at work [40]. Generally, workplace stressors, including work overload, nursing shortage, and lack of organizational support and empowerment, may contribute to the lower interpersonal self-efficacy levels by lowering nurses' confidence in managing conflicts. The increased level of self-efficacy, which was found in this study, may also be explained by the fact that clinical problem solving and decision-making skills are more structured, directed protocols, and reinforced by training. The current study revealed a statistically significant positive correlation between nurses' decision-making styles and self-efficacy, suggesting that nurses with higher self-efficacy exhibit more successful decision-making styles. Additionally, the coefficient of determination ($r^2 = 0.17$) shows that self-efficacy accounts for about 17% of the variance in decision-making styles, indicating a significant but incomplete contribution and suggesting that other psychological, organizational, and contextual factors also may have a significant influence on nurses' decision-making styles. The present results are consistent with several international studies. A study in Saudi Arabia found a strong positive link between self-efficacy and nurses' clinical decision-making. This means that nurses with higher self-efficacy are better at making decisions, thinking through clinical problems more quickly, and putting care tasks in order of importance [41]. Likewise, a study in Iran demonstrated that nurses with greater self-efficacy exhibited more accurate clinical decision-making and greater independence in patient care management [42]. These results support the current study and underscore self-efficacy as a fundamental psychological determinant of nursing decision-making style. Comparable results were also shown in a study conducted in Turkey, which identified a moderate correlation between nurse self-efficacy and decision-making competency [43]. In the Jordanian context, a study on psychological empowerment and nursing competence, especially in decision-making, found that nurses who are confident in their skills are more likely to use an intuitive decision-making style [44]. Although self-efficacy was moderately correlated with decision-making style, it is not the only factor. Other factors, such as workload, organizational support, clinical experience, leadership style, and availability of resources, may also exert considerable influence, as evidenced by prior literature and this study's results. Overall, This study's results emphasize the importance of boosting nurses' self-efficacy through focused training programs that emphasize clinical simulation, reflective practice, mentorship, and continuous professional development. Additionally, hospital administrators must think about fostering a workplace that respects independence, promotes critical thinking, and provides constructive feedback. The current study examined the differences in nurses' decision-making styles and self-efficacy based on demographic characteristics. It found that age, years of experience, job title, and educational level all had a significant difference. On the other hand, no statistically

significant differences were found according to department, hospital sector, or gender. These results imply that nurses' cognitive and psychosocial competencies may be more influenced by professional maturity and cumulative experience than by personal or occupational traits. No differences related to gender because both males and females in Jordan have equal training, clinical experience, and job duties and responsibilities, which could result in an equivalent level of confidence and decision-making style. The previous result is similar to sector and department results of no significance, which also implies that nurses working in both private and governmental hospitals have comparable organizational policies, nurse roles and responsibilities, and the same patient care standards. Similar results were shown in previous studies [41,43]. Nurses with postgraduate degrees showed greater decision-making competency and self-efficacy. This result may be due to increased theoretical preparation, exposure to evidence-based practice, leadership training, and development of critical thinking skills that are generally associated with postgraduate education. Post-graduate degree nurses may be exposed more to advanced clinical reasoning, reflective decision-making models, and all of these may improve their self-efficacy and confidence in decision-making. Also, nurses with more experience also gain experiential knowledge, enhance their nursing process competencies, and improve their self-efficacy through repeated exposure to clinical situations. Regarding age, older nurses are exposed to a variety of patient care scenarios and are better equipped to handle clinical challenges. Senior nurses may also hold more secure jobs and be acknowledged by their peers, which boosts their self-efficacy more. In terms of job title, nurses in leadership or administrative roles showed noticeably better decision-making competency, which may be related to the nature of administrative positions that include ongoing participation in all management roles, including problem-solving and decision-making, which allows them to improve their competencies. However, their self-efficacy was not significantly different, which may be caused by work overload, stressors, and accountability, which may interfere with their self-efficacy. All these results align with previous studies [41,43]. The strongest predictor of decision-making style was self-efficacy. This result is consistent with Bandura's social cognitive theory (1999) [35], which clarifies that people with higher self-efficacy are better equipped to manage challenging tasks, work under pressure, and make confident decisions in any situation. Strong self-efficacy may increase nurses' competency and trust in their professional clinical judgement, appropriately analyze patient data, and adapt to changing patient situations. So self-efficacy may improve resilience, emotional regulation, and cognitive flexibility in demanding clinical settings. This result is similar to previous studies [41-43]. Years of experience were also a predictor, which implies that nurses' decision-making competency is significantly enhanced by accumulated exposure. This aligns with Benner's "Novice to Expert" paradigm, which emphasizes that

clinical experience gradually develops via repeated practical experience [29]. The moderate explained variance (23.1%) in this study suggests that nurses' decision-making style may potentially be influenced by other variables not included in this study. So, as a recommendation, other variables such as organizational culture, workload, leadership support, empowerment, emotional intelligence, and workplace stress should be included in future studies. This study has significant implications for nursing education and hospital administration. High self-efficacy in clinical decision making is a good thing, but nurses' interpersonal and assertiveness skills need to be strengthened through focused interventions. Clinical and interpersonal self-efficacy may be balanced by training programs that emphasize communication, leadership, and conflict resolution, ultimately enhancing teamwork and job satisfaction.

Study Limitations

Several limitations must be acknowledged when interpreting the findings of this study. First, the use of a cross-sectional descriptive correlational design restricts the ability to establish causal relationships between decision-making styles and self-efficacy among nurses. Consequently, the identified correlations require cautious interpretation. Second, reliance on self-reported questionnaires may have increased the risk of response bias due to professional expectations or personal perceptions; participants may overestimate their decision-making and self-efficacy levels. Third, the study used a convenience sampling method, which may limit generalizability.

Conclusion

The results of this study indicated that nurses working in Jordanian hospitals had a high level of self-efficacy and decision-making competency. During patient care, nurses mostly used an intuitive decision-making style, which reflected their dependence on clinical experience, quick judgment, and practical knowledge. Their ability to combine organized clinical reasoning with experiential judgment in complicated healthcare situations is demonstrated by high scores in documentation, anticipation of intervention outcomes, and evidence-informed care planning. Additionally, the study found that nurses had a high level of self-efficacy, especially when it came to their ability to solve problems, flexibility, and confidence in handling challenging situations. Decision-making style and self-efficacy were found to be significantly positively correlated, suggesting that nurses who are more confident in their skills typically make better decisions. Additionally, decision-making and self-efficacy were strongly influenced by age, years of experience, job title, and educational level. Stronger professional competences and confidence were shown by nurses with postgraduate degrees, who were more experienced, older, and with administrative positions. Overall, the study highlights how important clinical experience and self-efficacy are in predicting nurses' decision-making styles. Therefore, to improve nurses'

confidence, critical thinking, and decision-making competencies, health care administrators should invest in leadership development, continuing professional education, and mentorship programs. Furthermore, they must create an encouraging work environment that may lead to improved nursing care services, safer procedures, and better patient outcomes in Jordanian hospitals.

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Conflict of interests

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Data sharing statement

The datasets generated and analyzed during the current study are available from the corresponding author upon reasonable request.

REFERENCES

- Sosan NYN, Almonis JAM, Almones RAM, Al-aklobi SA, Alshahrani HMH, Alamri ZDA, et al. The impact of nursing interventions in emergency care settings: A comprehensive review of clinical decision-making, patient safety, and outcome improvement. *Rev Diabet Stud*. 2025;901-11. doi: 10.70082/1praf06.
- Hossny EK, Alotaibi HS. Relationship between dominant decision-making style and creativity of nursing managers: A cross-sectional study. *BMC Nurs*. 2024;23(1):829. doi: 10.1186/s12912-024-02397-8.
- Bandura A. Social-cognitive theory. In: An introduction to theories of personality, Psychology Press; 2014. p. 341-60.
- Kaya S, Bakir GK. The relationship between clinical decision-making levels and self-efficacy levels of operating room nurses. *Perioper Care Oper Room Manag*. 2024;37:100416. doi: 10.1016/j.pcorn.2024.100416.
- Allari RS, Atout M, Hasan AA. The value of caring behavior and its impact on students' self-efficacy: Perceptions of undergraduate nursing students. *Nurs Forum*. 2020;55(2):259-266. doi: 10.1111/nuf.12424.
- Allari RS, Abu-El-Noor NI, Abu-El-Noor MK. Professional values in nursing students in Jordan: Baccalaureate nursing students' perception. *Front Nurs*. 2022;9(3). doi: 10.2478/fon-2022-0041.
- Raghavan S. Global advancements in international nursing science and healthcare innovation: Trends, challenges, and future directions. *J Comparative Nurs Res*. 2025;1(2).
- Aboalrob W, Ayed A, Malak MZ, Aqtam I. Understanding the influence of self-concept on clinical decision-making among nurses: A cross-sectional study. *PLoS One*. 2025;20(8):e0330905. doi: 10.1371/journal.pone.0330905.
- Al-Otaibi H, Kerari A. Quality of nursing work life, compassion fatigue, and self-efficacy among primary care nurses in Saudi Arabia. *Healthcare (Basel)*. 2025;13(15):1811. doi: 10.3390/healthcare13151811.
- Toqan D, Ayed A, Aqtam I, Harazne L, Ejheisheh MA, Younis MB, et al. Academic self-efficacy as a predictor of clinical decision-making among nursing students: A cross-sectional correlational study conducted in Palestine. *SAGE Open Nurs*. 2026;12:23779608261444447. doi: 10.1177/23779608261444447.
- AL Btoush MR, Malak MZ, Hamaideh SH, Shuhaiber AH. The relationship between emotional intelligence, self-efficacy, and clinical decision-making among critical care nurses in Jordan. *J Hum Behav Soc Environ*. 2025;35(3):454-468. doi: 10.1080/10911359.2024.2310261.
- Al-Qudah MM, Oweidat IA, Omar SA, Shosha GA, Dalky A, Al-Mugheed K, et al. The relationship between nursing informatics competencies and clinical decision-making among registered nurses working at tertiary hospitals. *Digit Health*. 2025;11:20552076251346015. doi: 10.1177/20552076251346015.
- Rababah J, Al-Hammouri MM. Improving clinical decision-making and self-directed learning among Jordanian nursing students using concept mapping. *Teach Learn Nurs*. 2024;19(2). doi: 10.1016/j.teln.2023.11.011.
- AlAmer NA. Decision-making styles and managerial creativity of nursing managers in Saudi Arabia: A multi-center cross-sectional study. *Healthcare (Basel)*. 2023;11(12):1719. doi: 10.3390/healthcare11121719.
- Raoust G, Kajonius P, Hansson S. Personality traits and decision-making styles among obstetricians and gynecologists managing childbirth emergencies. *Sci Rep*. 2023;13(1):5607. doi: 10.1038/s41598-023-32658-6.
- Polit D, Beck C (Editors). Essentials of nursing research: Appraising evidence for nursing practice (9th Ed.), Lippincott Williams & Wilkins; 2020.
- Grujičić J, Nikolić A. Alzheimer's disease: Epidemiological characteristics and its prevention. *Zdravstvena Zast*. 2021;50(2).
- Ministry of Health. The strategic plan of the Ministry of Health for the years 2023-2025 [Internet]. 2023. Available from: https://www.moh.gov.jo/ebv4.0/root_storage/en/eb_list_page/summary_of_the_strategic_plan_for_2018-2022.pdf
- Grove SK, Gray JR, (Editors). Understanding nursing research e-book: Building an evidence-based practice, (7th Ed.), Elsevier Health Sciences; 2018.
- Lauri S, Salanterä S. Developing an instrument to measure and describe clinical decision making in different nursing fields. *J Prof Nurs*. 2002;18(2):93-100. doi: 10.1053/jpnu.2002.32344.
- Hammond KR, (Editor). Human judgment and social policy: Irreducible uncertainty, inevitable error, unavoidable injustice. Oxford University Press; 2000.
- Björk IT, Hamilton GA. Clinical decision making of nurses working in hospital settings. *Nurs Res Pract*. 2011;2011:524918. doi: 10.1155/2011/524918.
- Schwarzer R, Jerusalem M. Generalized Self-Efficacy scale. In: Weinman J, Wright S, Johnston M, (Editors). Measures in health psychology: A user's portfolio. Causal and control beliefs, Windsor, UK; 1995. pp. 35-37.
- Di W, Nie Y, Chua BL, Chye S, Teo T. Developing a single-item general self-efficacy scale: An initial study. *J Psychoeduc Assess*. 2023;41(5):583-598. doi: 10.21203/rs.3.rs-342642/v1.
- Kalfoss M. Translation and adaption of questionnaires: A nursing challenge. *SAGE Open Nurs*. 2019;5:2377960818816810. doi: 10.1177/2377960818816810.
- George D, Mallery P. IBM SPSS statistics processes for Mac. IBM SPSS Statistics. 2019;26:26-42. doi: 10.4324/9780429056765.
- Maharmeh M, Alasad J, Salami I, Saleh Z, Darawad M. Clinical decision-making among critical care nurses: A qualitative study. *Health*. 2016;8(15):1807-19. doi: 10.4236/health.2016.815173.
- Alzahrani A, Bahari G, Alharbi K, Alqahtani N. Decision-making styles and job security among nurses working at public hospitals in Saudi Arabia: A cross-sectional multicentre study. *J Clin Diagn Res*. 2022;16(6). doi: 10.7860/JCDR/2022/55689.16520.
- Benner P. From novice to expert. *Am J Nurs*. 1982;82(3):402-407. PMID: 6917683.
- Munro CL, Swamy L. Documentation, data, and decision-making. *Am J Crit Care*. 2024;33(3):162-165. doi: 10.4037/ajcc2024617.
- Schöllhammer H, Jørgensen TM, Jensen HI. Documenting care together with patients: the experiences of nurses and patients. *BMC Nurs*. 2023;22(1):143. doi: 10.1186/s12912-023-01309-6.
- Almoajel A. Attitudes, knowledge, and skills toward adopting evidence-based practice in clinical decision-making of

- registered nurses in Saudi Arabia. *Res Theory Nurs Pract*. 2021;RTNP-D-20-00119. doi: 10.1891/RTNP-D-20-00119.
33. Abu Arra AY, Ayed A, Toqan D, Albashtawy M, Salameh B, Sarhan AL, et al. The factors influencing nurses' clinical decision-making in emergency department. *Inquiry*. 2023;60:00469580231152080. doi: 10.1177/00469580231152080.
 34. Alaseeri R, Rajab A, Banakhar M. Do personal differences and organizational factors influence nurses' decision making? A qualitative study. *Nurs Rep*. 2021;11(3):714-727. doi: 10.3390/nursrep11030067.
 35. Bandura A. Social cognitive theory: an agentic perspective. *Annu Rev Psychol*. 2001;52:1-26. doi: 10.1146/annurev.psych.52.1.1.
 36. Barnawi N, Barnawi B. The relationship between nurses' self-efficacy and occupational stress in the critical care unit at King Abdul-Aziz Hospital in Jeddah, Saudi Arabia. *Nurs Commun*. 2023;7:e2023028. doi: 10.53388/IN2023028.
 37. Bawazier BS, Almulla H, Mansour M, Hammad SS, Alameri RA, Aldossary L, et al. The relationship between perceived self-efficacy and resilience among pediatric nurses in Eastern Province of Saudi Arabia. *Risk Manag Healthc Policy*. 2025;739-746. doi: 10.2147/RMHP.S510084.
 38. Khosravi S, Sajadi M, Mehrabi F. Relationship between clinical environment stressors and nursing students self-efficacy in clinical performance. *J Nurs Educ*. 2019;8(2). doi: 10.21859/JNE-08206.
 39. Khalifa DA, Abdallah ES, Sallam TA, Mohamoud HE. Effect of assertiveness on job satisfaction and nurses' job performance among staff nurses at Matai Central Hospital. *Helwan Int J Nurs Res Pract*. 2025;4(11):79-97. doi: 10.21608/hijnrp.2025.404410.1387.
 40. Kausar T, Fatima F, Naureen A, Yasmeen S, Noreen S, Tariq R, et al. Analysis of achievement, motivation and self-efficacy among undergraduate nursing students. *Pak J Health Sci*. 2024;98-102. doi: 10.54393/pjhs.v5i12.2447.
 41. Alharbi A, Alkubati SA, Albaqawi H, Ali AZ, Hamed LA, Mohammed S, et al. Mediating roles of psychological empowerment and self-efficacy in the relationship between leadership and clinical decision-making among nursing students: A path-analysis approach. *Nurse Educ Today*. 2026;161:107022. doi: 10.1016/j.nedt.2026.107022.
 42. Albooghobeish M, Saidkhani V, Ahmadi AK, Farzaneh M. Clinical decision-making and self-efficacy skills in anesthesiology nursing students: A cross-sectional study. *Shiraz E-Med J*. 2023;24(4). doi: 10.5812/semj-134178.
 43. Akça K, Berşe S. Nursing students' self-efficacy and clinical decision-making in the context of medication administration to children: A descriptive-correlational study. *Nurse Educ Pract*. 2023;72:103775. doi: 10.1016/j.nepr.2023.103775.
 44. Al-Dweik G, Al-Daken L, Abu-Snieneh H, Ahmad M. Work-related empowerment among nurses: Literature review. *Int J Product Qual Manag*. 2016;19(2):168-186.