

# The Factors Influencing Nurses' Clinical Decision-Making in Emergency Department

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## Abstract

In an emergency, making the correct decision is vital. It is a necessary element of professional nursing care, and the ability of nurses to make successful clinical decisions is the most critical element influencing care quality. The purpose of this study was to assess the factors influencing nurses' clinical decision-making in the emergency department of Palestinian hospitals. A cross-sectional study was targeted at all nurses working in emergency departments at the Palestinian hospitals. The study was completed with 227 nurses, and collecting data was performed with the Clinical Decision Making in Nursing Scale. Results of the study revealed that the average score for the total clinical decision-making score was 3.3 (SD=0.23). The subscales of clinical decision making were "search for alternatives or options," "canvassing of objectives and values," "evaluation and reevaluation of consequences," and "search for information and unbiased assimilation of new information." Furthermore, multiple linear regression analysis revealed that degree and work hours accounted for 11.7% of the variance in clinical decision-making. The study confirmed the average score for clinical decision-making was slightly higher than the average score. Also, it approved that nursing degree and work hours were predictors of clinical decision-making among nurses in emergency departments.

## Keywords

emergency service, clinical decision-making, patient care, hospital, nurses

### What do we already know about this topic?

The novice nurse's decision-making abilities as compared to the expert have generated intense debate over the years.

### How does your research contribute to the field?

Nurses must have the ability to make firm clinical decisions in this new era of health care delivery

### What are your research's implications toward theory, practice, or policy?

The nurse managers must seek strategies to decrease and, if feasible, eliminate factors that influence clinical decision-making practice, while also encouraging the implementation and utilization of facilitating factors.

## Introduction

Nurses who work in an emergency department frequently care for critically ill patients in a rapidly changing situation, increasing their risk of burnout. As a result, they are particularly vulnerable to being held accountable for decisions they did not have time to think about or were driven to make.<sup>1</sup>

The dynamic of the health care environment requires nurses to become effective decision-makers in order to adapt to the needs of clients. In other words, they should be able to filter and synthesize information, make judgments, and correctly apply those decisions to address their clients' problems in the context of a multidisciplinary team.<sup>2</sup>

In an emergency, timely decision-making is vital.<sup>3</sup> It is a fundamental component of professional nursing care, and

nurses' capacity to make effective clinical decisions is the most critical factor influencing care quality.<sup>4</sup> The quest for

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professional recognition by the nursing discipline is also strongly reliant on practicing nurses' capacity to appropriately describe and solve challenges that are specifically nursing in origin.<sup>5</sup>

Nurse decision-making variables are divided into 4 categories: nurse characteristics, patient characteristics, environmental factors, and organizational determinants. Nursing experience, clinical expertise, nurses' demographic parameters, autonomy, and individual attitudes toward patient care were identified as nurse characteristics.<sup>6</sup> The interaction of the multidisciplinary team, the hospital's goal and vision, decision-making tools (protocols and guidelines), and institutional resources were all organizational determinants.<sup>6</sup>

Clinical decision-making (CDM) is a critical skill that each nurse should be equipped with. Nurses must have the ability to make firm clinical decisions in this new era of health care delivery.<sup>7</sup> For successful day-to-day patient care, nurses must be able to analyze a wide range of information, utilizing CDM expertise, to solve complicated problems that arise in clinical practice. This will guarantee patient safety and encourage good results. The job of nurses is more critical than ever in this era of health care development.<sup>8</sup>

Nurses must be able to make sound decisions in the face of constantly changing and increasingly complex situations in health care services.<sup>9</sup> Decisions must be made when a patient's condition changes, necessitating the nurse to recognize, analyze, and integrate it.<sup>10</sup> As a result, achieving the patient's goals necessitates a multi-step decision-making process that is accompanied by critical thinking. In the meanwhile, numerous errors have been made as a result of thinking mistakes that influence decision-making processes.<sup>11</sup> As a result, high expectations of nurses to overcome and minimize events involving registered nurses are reliant on the CDM skills of the nurses. There is additional support for this notion in a publication called *Enhancing Patient Safety* that says the nurse's capacity to recognize, interrupt, and rectify medical mistakes would help protect patients by using their entire talents and responsibilities.<sup>12</sup>

As nurses are involved in every area of patient care in the acute setting, they often stay and care for patients more frequently than other health care workers in the hospital.<sup>13</sup> Over the years, there has been much discussion and disagreement about the novice nurse's decision-making ability compared to the expert.<sup>14</sup> Clinical experience, critical thinking ability, an extensive knowledge base, and the capacity to integrate and incorporate evidence-based research into practice are just a few of the numerous abilities necessary to assist in any decision-making process.<sup>15</sup>

To our knowledge, this is the first study to assess nurses' perceptions of factors that affect decision-making among nurses in emergency departments of the West Bank's hospitals. Therefore, the current study will assess the factors affecting decision-making among nurses in emergency departments in Palestinian hospitals.

## Method

### *Study Design, Setting, and Participants*

A cross-sectional study was conducted on nurses who work in the emergency departments of government hospitals. This study covered the north, middle, and south of the West Bank. With a confidence level of 95%, a margin of error of 5%, a population of 248 people, and a response rate of 50%, the sample size was calculated using the Raosoft program. A total sample of 151 participants was needed to conduct this study. To overcome the attrition rate and those who refuse to participate, all the nurses (248) who work in the emergency departments of government hospitals were included in the study.

### *Inclusion Criteria*

Nurses who are working in a government hospital in the emergency department.

Having at least 6 months of working experience at the emergency departments.

### *Exclusion Criteria*

Nurses who are working in other departments

### *Data Collection Process*

After obtaining approval from the Arab American University and Ministry of Health, the researchers contacted each nursing administrator in the targeted hospitals to present the purpose of the study and obtain the list of nurses in the hospitals. The questionnaires were distributed face-to-face at each hospital. Participants assigned informed consent, which was on the first page of the questionnaire. Because Arabic is the native language, to overcome any language difficulties and preserve the validity of the content, the instruments were translated following the translation protocol of the World Health Organization. The instrument was translated into Arabic and back-translated into English. Also, the validity of the instrument was tested, in which an Arabic copy of the instrument was sent to 5 bilingual panels of experts in nursing education. The experts had no comments.

### *Data Collection Tool*

A questionnaire was consist of the following parts:

- Part 1: Characteristics of participants: It includes age, gender, educational level, work shift, experience in nursing, and experience in the emergency department.
- Part 2: "Nursing Clinical Decision Making Scale (CDMNS)" developed by: Jenkins.<sup>16</sup> "This scale

measures nursing's perception in clinical decision-making based on self-expression." The CDMNS consists of 40 items and 4 subscales. These subscales included the search for alternatives or options, canvassing of objectives and values, evaluation and reevaluation of consequences, and search for information and unbiased assimilation of new information. Each subscale is composed of 10 items, in which each item is graded on a 5-point Likert scale: (5) always, (4) frequently, (3) occasionally, (2) seldom, and (1) never. This scale is scored according to the total mean score for the scale and subscales and categorized as follows: a mean score of  $\geq 3.00$  indicates high clinical decision-making, and a mean score of  $< 3.00$  indicates low decision-making.<sup>16</sup> Validity of the CDMNS was supported in nursing literature.<sup>16,17</sup> The internal consistency of the CDMNS on a sample of nurses was 0.83,<sup>18</sup> and it has since been utilized in over 90 research studies.<sup>19</sup> The Cronbach's alpha for the Clinical Decision-Making in Nursing Scale was .89 in the current study.

### Pilot Study

The piloting was carried out on a random sample of 20 participants who met the inclusion criteria. The participants indicated that they had no trouble interpreting or clarifying the contents of the instruments. The pilot study found that the average time taken to complete the questionnaire was 10 to 20 minutes.

### Ethical Considerations

Ethical approval was obtained from Arab American University and the Ministry of Health. A written informed consent was obtained from the participants before completing the questionnaire. Voluntary participation was explained. It was explained that all data will be kept confidential and will be used for study purposes only. A clear explanation was given to each participant about the study objectives and tool, and enough time was given for questions.

### Data Analysis

Statistical analysis was performed using the Statistical Package for Social Sciences (SPSS version 21). Descriptive statistics for all parameters included in this analysis were performed. These analyses included distributions of means, standard deviations, frequencies, and percentages. Moreover, multiple linear regression was used.

### Results

Two hundred and twenty-seven out of 248 questionnaires (91.5% response rate) were completed and returned by the

**Table 1.** Distribution of Demographic Characteristics Among Nurses (N=227).

Characteristics	M (SD)	n (%)
Age	32.9 (6.73)	
Gender		
Female		106 (46.7)
Male		121 (53.3)
Education level		
Diploma		39 (17.2)
Bachelor		174 (76.7)
Master and above		14 (6.2)
Years of nursing experience		
6 months to 2 years		47 (20.7)
3 years to 10 years		104 (45.8)
More than 10 years		76 (33.5)
Years of nursing experience in emergency department		
6 months to 2 years		56 (24.7)
3 years to 10 years		105 (46.3)
More than 10 years		66 (29.1)
Work shift		
Evening		7 (3.1)
Night		1 (0.4)
Rotation		10 (4.4)
Rotation		209 (92.1)
Job position		
Practical nurse		36 (15.42)
Staff nurse		187 (82.38)
Head nurse		5 (2.2)
Number of patients	17.8 (6.2)	

Note. M=Mean; SD=standard deviation.

nurses. The findings revealed that the mean age of nurses was 32.9 (SD=6.73) years. With regard to gender, the majority 121(53.3%) were males, and the remaining were females. Further, approximately 174 (76.7%) had a bachelor's degree in nursing. Also, the findings revealed that 104 (45.8%) of the participants had 3 to 10 years experience in nursing, and slightly more, 105 (46.3%) had the same experience in the emergency department. Most of the participants 209 (92.1%) reported that they work a rotation shift. The participants also reported that 17.8(SD=6.2) the average number of patients they cared for on the current or last shift that they worked. In addition, most of the participants, 187 (82.38%) were staff nurses, as seen in Table 1.

The possible range for clinical decision-making was 1 to 5. The average score for the total clinical decision-making score was 3.3 (SD=0.23). The subscales of clinical decision making were "search for alternatives or options," "canvassing of objectives and values," "evaluation and reevaluation of consequences," and "search for information and unbiased assimilation of new information." The average scores for 3 of the clinical decision-making subscales were slightly higher than the average scores. Specifically, search for alternatives or options had a mean score of (M=3.6, SD=0.39),

**Table 2.** Description of Perception of Clinical Decision Making Among Nurses (N=227).

Clinical decision making	Mean (SD)
Clinical decision-making total score	3.3 (0.23)
“Search for alternatives or options”	3.6 (0.39)
“Canvassing of objectives and values”	3.4 (0.33)
“Evaluation and reevaluation of consequences”	2.9 (0.24)
“Search for information and unbiased assimilation of new information”	3.5 (0.35)

canvassing of objectives and values had a mean score of (M=3.4, SD=0.33), evaluation and reevaluation of consequences had a mean score of (M=2.9, SD=0.24), and lastly, search for information and unbiased assimilation of new information had a mean score of (M=3.5, SD=0.35), as seen in Table 2.

The predictors of clinical decision making among nurses after adjusting demographic characteristics. All assumptions were met for linear regression. Results from linear regression analyses found that nursing degree and work hours accounted for 11.7% of the clinical decision-making variance (Table 3).

## Discussion

The literature utilizes a variety of terminology to characterize decision-making, including clinical judgment, decision-making, and clinical reasoning. While these phrases are used interchangeably, they have been defined as a practitioner’s selection from a set of options.<sup>20</sup> Many essential decisions are made by nurses in emergency environments. Despite the fact that nurses’ professional roles have expanded and grown more important, these additional responsibilities serve to facilitate broader decision-making.<sup>19</sup> Patients in emergency departments are critically sick and usually unstable, and their health rapidly deteriorates.<sup>21</sup> These changes require nurses to make decisions in a short amount of time.<sup>22</sup>

In the current study, the average score for the total clinical decision-making score was higher than average. The scores for 3 of the clinical decision-making subscales were slightly higher than the average scores (“search for alternatives or options,” “canvassing of objectives and values,” and “search for information and unbiased assimilation of new information”), and 1 subscale was slightly lower than the average score (“evaluation and reevaluation of consequences”). These results were congruent with the study conducted by Mohamed, which concluded that nurses had similar perceptions of clinical decision-making.<sup>23</sup> Similar results from a recent study conducted by Batran et al<sup>24</sup> supported the current study. Also, these results were supported by the findings of Bittencourt and Crossetti, who reported

that critical thinking and reasoning had high rankings in their study.<sup>25</sup>

In contrast with the present findings, Noohi et al<sup>10</sup> and Elkoca<sup>26</sup> found a low mean score for critical thinking skills among nurses. Also, these results were incongruent with Shahraki Moghaddam et al,<sup>27</sup> who concluded that nurses attained the highest score in the phase of “evaluation of alternative solutions” and the lowest score in the phase of “implementing the solution.”

The current study also revealed that nursing degree and work hours were predictors of clinical decision-making among nurses in emergency departments. These results were supported by Wu et al,<sup>28</sup> who found that educational level had significant positive impacts on nurses’ CDM skills. However, these results were incongruent with the study conducted by Hoffman et al,<sup>29</sup> which concluded that education and experience were not significantly related to decision-making. Holding a professional occupational orientation was the component that accounted for the most variability in clinical decision-making, followed by level of appointment, area of clinical specialty, and age. Furthermore, Beyaffers et al<sup>30</sup> found that commitment, authority, and autonomy, ongoing supervision and feedback, and good communication facilitate clinical decision-making practice, whereas the patient-nurse ratio, poor resource management, the structure and culture of the health care system, low self-confidence, a lack of professional development, and a low level of knowledge inhibit clinical decision-making practice among study participants.

The study recommended that nurse managers seek strategies to decrease and, if feasible, eliminate factors that influence clinical decision-making practice, while also encouraging the implementation and utilization of facilitating factors. Also, continuous in-service training helps broaden nurses’ knowledge base, as does continual supervision and feedback.

## Limitations of the Study

A self-reported questionnaire has the potential to bias the relationship under investigation. We also acknowledge that because this study was conducted in the West Bank, it may not accurately reflect CDM usage in Palestine or other countries.

## Conclusion

In general, this study confirmed the average score for clinical decision-making was slightly higher than the average score. It was also determined that nursing degree and work hours were predictors of clinical decision making among emergency department nurses.

**Table 3.** Predictors of Clinical Decision Making Among Nurses in Emergency Departments.

Model	B	Beta	t	P value	95.0% Confidence interval for B	
					Lower bound	Upper bound
Age	0.006	.163	1.568	.118	-0.001	0.013
Gender	-0.036	-.077	-1.205	.230	-0.095	0.023
Nursing degree	0.194	.390	4.156	.001	0.102	0.286
Job title	-0.016	-.027	-.290	.772	-0.125	0.093
Past experience in health care	-0.039	-.120	-.836	.404	-0.130	0.053
Experience in emergency	-0.004	-.012	-.088	.930	-0.090	0.082
Work hours	0.090	.216	3.056	.003	0.032	0.148
Patients	0.004	.099	1.436	.152	-0.001	0.009

Note. Model 1.  $R^2 = .148$ , adjusted  $R^2 = .117$ ,  $F$ -statistic = 4.752,  $df = 8$ .

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### Supplemental Material

Supplemental material for this article is available online.

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