Arab American University– Palestine

Faculty of Graduate Studies

The Factors Influencing Nurses' Clinical Decision-Making in emergency department: Nursing perspective

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This Thesis was Submitted in Partial Fulfillment of the Requirements for The Master's Degree in Emergency Nursing

January/ 2022

THESIS APPROVAL

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This thesis was defended successfully on 20 January, 2022 and approved by:

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DECLARATION

I declare that the work in this study titled “The Factors Influencing Nurses' Clinical Decision-Making in emergency department: Nursing perspective” carried out by me under the supervision of Dr. Ahmad Ayed in the department of Nursing.

In addition, I understand the nature of plagiarism, and I am aware of the University's policy on this .

The work provided in this thesis, unless otherwise referenced, is the researcher's own work and has not been submitted by others elsewhere for any other degree or qualification.

Name: Ahmed Yahya Abu Arra

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Date: 30/1/2024

DEDICATION

I dedicate my study to my beloved parents who were my continuous source of motivation and inspiration, who gave me the strength and commitment to work with enthusiasm and determination over every task. For their encouragement, I do dedicate this study to my supervisor and all my family members.

Also, I dedicate this work to all nurses in Palestine wherever they work.

ACKNOWLEDGMENT

First and foremost, praises to the almighty Allah, who has blessed me throughout the completion of this thesis. I would like to thank everyone who helped me to achieve my goal to finish the master's degree in Nursing Emergency. I extend my appreciation to my supervisor Dr. Ahmad Ayed; because of his expertise, support, and direction, I have accomplished much more than I could even think of.

I am highly indebted to the Arab American University in Palestine for giving me the opportunity and resources needed to carry out this study. I am grateful to every single one who participated in the current study directly or indirectly.

Last but not least, my sincerest appreciation goes to my family who gave their endless support and prayed for my success throughout the journey to obtain a master’s degree.

ABSTRACT

Introduction:

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 elements influencing nurses' decision-making are divided into four categories; Characteristics of nurses, organizational variables, patient characteristics, and environmental factors Nursing experience, clinical expertise, nurses' demographic parameters, autonomy, and individual attitudes toward patient care were identified as characteristics of nurses. The purpose of this study was to assess the factors influencing Nurses' Clinical Decision-Making in the emergency department of West Bank hospitals in Palestine.

Methodology:

A cross-sectional study was targeted all nurses working in emergency departments at the government hospitals in the West Bank, Palestine. The study was conducted on 227 nurses and collecting data was performed with Clinical Decision Making in Nursing Scale.

Results:

Results of the study revealed that the average score for the total clinical decision-making score was 3.3(SD=0.23). Results from linear regression analysis found that nursing degree and work hours accounted for 11.7% of the clinical decision-making variance.

Conclusions:

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:

Clinical Decision-Making, Cross-Sectional Studies, Emergency Service, Hospital, Patient Care.

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LIST OF ABBREVIATIONS

Analysis of variance	ANOVA
Clinical Decision Making in Nursing Scale	CDMNS
Clinical decision-making	CDM
Emergency department	ED
Registered Nurse	RN
Standard deviation	SD
Statistical Package for Social Sciences	SPSS

CHAPTER ONE:

INTRODUCTION

1.1 Background

Nurses who work in an emergency department often care for acute patients in a fast-paced atmosphere, putting them at risk of burnout. This situation makes them especially vulnerable to be accountable for decisions they did not have time to consider or have been pressured into (Adriaenssens, De Gucht, & Maes, 2015).

The dynamic of the health care environment involves nurses becoming capable decision-makers in order to adapt to the requirements of clients. In other words, they should be able to sift and synthesize information, make decisions and appropriately implement these decisions to solve their clients' problems in the context of a multidisciplinary team (White, 2003).

Appropriate decision-making is critical in emergency situations (Sun, Ma, & Zhao, 2016). It is an essential component of professional nursing care and, nurses' ability to make effective clinical decisions is the most important factor affecting the quality of care (Gillespie, 2010). The nursing discipline's pursuit of professional recognition also relies heavily upon the ability to practice nurses to correctly define and solve problems that are uniquely nursing in origin (Hoeve, Jansen, & Roodbol, 2014).

Nurses' decision-making factors are categorized into four domains: nurses' characteristics, patient characteristics, organizational factors, and environmental factors. Nurses' characteristics were identified as nursing experience, clinical knowledge, nurses' demographic factors, and autonomy and individual attitudes about patient care

(Ten Ham, Ricks, van Rooyen, & Jordan, 2017). The organizational factors were the interaction between the multidisciplinary team, the hospital's mission & vision, decision-making tools (protocols and guidelines), and the institutional resources (Ten Ham et al., 2017).

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. 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 (Hamilton, 2011).

Nurses must be able to make sound decisions in the face of constantly changing and increasingly complex situations in health care services (Ursoniu, Vernic, Muntean, & Timar, 2012). There is substantial data to support the relationship between nurse care and better patient outcomes (Dykes & Collins, 2013). New information and decisions must be made when a patient's condition changes necessitating the nurse to recognize, analyze, and integrate it (Noohi, Karimi-Noghondar, & Haghdoost, 2012). 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 (Hughes, 2008). 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 (Gaffney, Hatcher, & Milligan, 2016).

As nurses are involved in every area of patient care in the acute setting. Nurses often stay and care for patients more frequently than the other health care workers in the hospital (Suliman & Aljezawi, 2018). The current research assesses the factors that influence decision-making among nurses in emergency departments of West Bank's hospitals.

1.2 Problem Statement

The decision-making capabilities of the novice nurse in comparison to the expert have evoked much opinion and debate over the years (Tanner, 2006). Critical thinking ability, clinical experience, an in-depth knowledge base, and the ability to integrate and assimilate evidenced-based research into practice, are just a few of the many skills required to assist in any decision-making process (Odell, 2015).

To our knowledge, after searching different databases, there is no published research in Palestine on nurses' perceptions of the missed nursing care. This is also one of the first studies to assess nurses' perception of factors that affect decision-making among nurses in emergency departments of West Bank's hospitals. Therefore, the current study will assess the factors affecting decision-making among nurses in emergency departments of West Bank's hospitals.

1.3 Significance of the Study

- This study is essential for hospitals and nurses, as its results could help to establish effective interventions to enhance and improve clinical reasoning, clinical judgment, and decision making.
- This study can help determine the real value of clinical decision-making in the emergency department, which can play a good role in improving the quality of care in the future.
- This research will also provide a database for researchers in Palestine and other Arab and global countries.

1.4 Research Questions

The research questions of this study will be:

1. Is nurses' perception of clinical decision-making high among nurses in emergency departments?

2. Is there significant differences between demographic characteristics and nurses' perception of clinical decision-making mean scores among nurses in emergency departments?

3. Is there a significant relationship between age and nurse' perception of clinical decision-making mean scores among nurses in emergency departments?

4. Is there significant differences between work characteristics and nurses' perception of clinical decision-making mean scores among nurses in emergency departments?

5. Is there a significant relationship between the number of patients and nurses' perception of clinical decision-making mean scores among nurses in emergency departments?

6. What are the factors that influence nurses' clinical decision-making in emergency departments?

1.5 Objectives

The purpose of this study was to assess the factors influencing Nurses' Clinical Decision-Making in emergency department of West Bank hospitals in Palestine.

1.6 Variables of the Study

- Demographic characteristics: age, gender, educational level, work shift, experience in nursing, and experience in the emergency department
- Perception of Clinical decision-making

1.7 Conceptual and Operational Definitions

Clinical decision-making

Conceptual definition: is defined as a conscious, cognitive impression of how one goes about making decisions (Jenkins H. M., 1985).

Operational definition: Clinical decision-making in this study was measured by clinical decision-making nursing scale (CDMNS); 5-point Likert Scale (5=Always, 1=Never).

CHAPTER TWO:

LITERATURE REVIEW

2.1 Introduction

This chapter provides the literature review about the study: Factors Influencing Nurse's Clinical Decision-Making for the Management of Emergency Care: Nurses' perspective. The goal of doing a literature review is to gain a thorough understanding of the research topic and identify any unexplored research topics or knowledge gaps. Studies in the subject can be compared with past findings, critiqued, and new directions for research can be suggested with the use of a literature review.

2.2 Clinical Decision-making Skills

Many definitions pertaining to CDM skills have been described by previous researchers with different theories. In general, CDM is defined as the capacity to filter and synthesize information, make judgments, and correctly apply those decisions in a clinical context. Also, deciding on the best course of action to solve an issue that affects a person or a family and putting that plan into action (Muir, 2004). The review of some CDM skill definitions shows the conceptual diversity as a result of the disciplinary framework from where they obtain. Decision-making is a critical and important area in all disciplines in medicine. Besides basic training in formal decision-making we need to ensure that undergraduates and postgraduates have adequate training in critical thinking, problem-solving, and a working understanding of the multiple cognitive and affective biases to which they might be vulnerable (Croskerry, 2005).

Nurses should be equipped with CDM skills to develop the process further in the professional arena. Even though studies concerning the CDM skills in nursing have been conducted for years but the research is still ongoing to enhance the nurse's competencies to promote patient safety (Blum, Borglund, & Parcells, 2010).

Through literature reviews, less attention has been given to the process of assessing nurse's CDM skill. However, a cross-sectional descriptive survey was conducted in Taiwan to investigate nurse practitioner's CDM skills and the factors that affect them (Chen, Hsu, Chang, & Lin, 2016). The tool used to measure 197 nurse practitioners in this study was the Clinical Decision-Making Model Inventory. The findings showed that that nurses' age, experience, work unit, professional knowledge, and critical thinking disposition impacted the decision-making scores. This study suggested considering a nurse practitioner's knowledge readiness and their specific requirements while planning on-duty education (Chen et al., 2016).

2.3 Clinical Decision- making in Nursing

Clinical decision-making, an important process in which the best action to achieve the desired goals is chosen, largely determines the quality of care, patient safety, and the possibility of future complications (Stubbings, Chaboyer, & McMurray, 2012). As an essential part of the professional duties of the medical personnel, clinical decision-making consists of the analysis of information, making decisions, and taking action based on those decisions to accomplish the desired objective (Wu, Yang, Liu, & Ye, 2016). According to Emergency Nurses Association, clinical decision-making is one of the most important professional capabilities in emergency care personnel which can

significantly improve the efficacy and quality of care provided (Reay, Smith-MacDonald, Then, Hall, & Rankin, 2020).

A qualitative study was conducted by Maharmeh et al. (2016) to describe the decision-making process and decision activities of critical care nurses in natural clinical settings. The study was done on twenty-four critical care nurses from three hospitals in Jordan. The study revealed that the decision-making process is continuous, and that experience is one of the main factors that determine nurses' ability to make decisions (Maharmeh, Alasad, Salami, Saleh, & Darawad, 2016).

Another study was carried out with a qualitative content analysis approach by Ebrahimian et al. (2018) to explain the factors that influence the emergency specialists' decision-making in case of emergency conditions in patients. The conditions that control the decision-making process for patients in the emergency department differ from those that influence decision-making in other hospital departments. There are numerous techniques that emergency experts might take when deciding on the patients' emergency situations. Therefore, notably, the emergency specialists' working conditions and the others' expectations from these specialists should be considered (Ebrahimian, Hashemi-Amrei, & Monesan, 2018).

Also, a qualitative study with a content analysis approach was conducted by Bijani et al. (2021) to explore the major challenges and barriers which affect clinical decision-making from the perspective of EMS personnel. The current study's findings indicate that experience, clinical knowledge, and skills contribute to emergency care personnel's professional capacities in making clinical choices. When there are a big number of injured patients to be cared to, good cooperation skills and time management

can help to avoid emotions of uncertainty. Effective clinical decision-making abilities may assist a person not only make the right option, but also increase their resilience and ability to adapt to difficult and unpredictable circumstances. Professional factors, organizational management, and ethical matters constitute the other major factors that influence the clinical decision-making of emergency care personnel at the scene of accidents and determine the quality of their clinical performance (Bijani, Abedi, Karimi, & Tehranineshat, 2021).

A literature review was conducted by Muntean (2012) to review the factors that contribute to the clinical judgment and decision-making of novice nurses. Individual and contextual factors were used to classify the aspects that impacted decision-making. Individual factors included aspects that were particular to the decision-maker, such as cue recognition, experience, and hypothesis updating. Environmental factors captured elements around the decision process. Previous studies have shown that nurses' perceptions of clinical decision-making are important, but the variables that influence perception are being debated (Muntean, 2012).

2.4 Nursing in the Emergency Department

The emergency department is a hospital department capable of providing medical services to patients who arrive at the hospital in need of immediate assistance. Certain hospital incidents, such as cardiac arrests, may necessitate the intervention of emergency department personnel. The fundamental function of the emergency room is to treat critically sick and wounded patients. However, the emergency department (ED) offers a substantial proportion of unplanned urgent treatment, frequently due to a lack of capacity in other sections of the healthcare system. The ED also functions as a referral

center for additional healthcare practitioners to assess and stabilize patients, as well as admit them if required (Asplin et al., 2003).

Nurses working in such environments need to be divine, sharp and have proper clinical decision-making skills. A review of literature for the factors influencing nurses' clinical decision-making yielded lots of studies.

A Swedish study investigated the variables that impact ambulance nurses' decision-making in emergency circumstances. Ambulance nurses are often compelled to make choices based on incomplete information. It was discovered that when nurses are dispatched to an emergency, the scope and severity of the situation determine how decisions are made. Furthermore, the nurses' experience is essential for decision-making since it represents a qualitative difference in the effect of a rookie nurse vs a more experienced nurse on decision-making (Asplin et al., 2003).

Triage in the emergency department (ED) is the first step in the treatment procedure. During triage, the patient is examined, usually by a Registered Nurse (RN), and given an acuity rating, which indicates how long they can wait to see a doctor without their health being jeopardized (Considine et al., 2012). Research by Katrina et al (2008) explored how Registered Nurses with high and poor triage accuracy used thinking strategies and cognitive processing in the emergency department triage. The Registered Nurses employed a range of thinking techniques, including information gathering, hypothesis generation, and proposition formulation. They organized the triage process in different ways, starting with data collection, hypothesis generation, and acuity rating allocation. Based on their prior triage accuracy, participants' use of

thinking methods and the structure of the triage process indicated only minor variations (Göransson, Ehnfors, Fonteyn, & Ehrenberg, 2008).

On the other hand, the life or death of a patient is frequently in the hands of the nurse who decides whether or not to call for help in an emergency. Descriptive research examined the experiences of registered nurses in making judgments on whether to call for emergency help for their patients. The major results were that nurses questioned if they were doing the right thing by calling the emergency team, occasionally cooperated with others before calling and the majority felt frightened and worried. They could tell when a patient was deteriorating because they had a gut sensation that something was wrong, but not based on clear criteria. The identification of worsening was aided by familiarity with the patient and previous experiences. This link demonstrates the significance of hands-on experience in the development of clinical decision-making abilities. Additionally, nurses who call for emergency help should be given the chance to debrief after they make the call. As described in the emergency calling criterion, their reliance on subjective information before seeking objective information implies that nurses should not discount or dismiss concerns they have concerning patients (Cioffi, 2000).

Patients visit the emergency room for a variety of reasons, the most prevalent of which is pain. In the treatment of severe discomfort, emergency nurses play a critical role. In Turkey, one research looked at emergency nurses' knowledge, attitudes, and clinical decision-making abilities regarding pain. According to the findings, emergency nurses continue to have insufficient knowledge, clinical decision-making abilities, and unfavorable attitudes about pain. For instance, for pain evaluation, the majority of

nurses did not use a scale. Pain treatment should be postponed, according to nurses, because it might alter the diagnosis in emergency rooms. They thought that opioids, at any dose, cause respiratory depression. Which all are incorrect pieces of information that might lead to poor clinical decision making (Ucuzal & Doğan, 2015).

2.5 Summary

To our knowledge, after searching different databases, there is no published research in Palestine on nurses' perceptions of the missed nursing care. This is also one of the first studies to assess nurses' perception of factors that affect decision-making among nurses in emergency departments of West Bank's hospitals. Therefore, the current study assesses the factors that influence decision-making among nurses in emergency departments of West Bank's hospitals.

Nursing care is an important issue based on appropriate clinical decision-making from professional nurses and quality care provided for patients. So, the nurses in the emergency department evaluate and encounter patients and spend much time with them compared with other health care providers. Appropriate clinical decision-making is a core topic in emergencies in emergency departments, thus inappropriate clinical decision-making is a gap and bad sign. The results and recommendations can give an actual picture of the quality nursing care that is provided for patients. I’m a nurse working in the emergency department and as a student enrolled in emergency nursing master, I desire to improve the quality of nursing care by appropriate clinical decision making in emergencies. The first step is to make an assessment and give feedback and recommendations based on the results.

CHAPTER THREE:

METHODOLOGY

3.1 Introduction

This chapter presents the method used in this study to answer the research questions. In this chapter different items were explained: study design, study setting of the study, study population and sampling process, period of the study, inclusion and exclusion criteria, study tools, ethical consideration, pilot study, data collection, and data analysis.

3.2 Study Design

This design was implemented through a quantitative descriptive cross-sectional study. This design was appropriate to the nature of the variables included in the study to assess the factors influencing Nurses' Clinical Decision-Making in emergency department of West Bank's hospitals in Palestine. Cross-sectional study was chosen because it is appropriate for describing the status of phenomena or for describing relationships among phenomena at a fixed point in time (Polit & Beck, 2014).

3.3 Study Setting

According to Palestinian MOH 2018 the number of hospitals in Palestine is 82 hospitals, and 52 of them located in west bank. Seven thousand eight hundred and seventy-nine of nurses in Palestine (MOH, 2018). This study was covered the north, middle and south of the Palestine, and the target population was all nurses who work in the Emergency departments of governmental hospitals, as seen in table 3-1.

Table 3-1: Distribution of emergency nurses department in West bank

Hospital	District	Emergency department Nurses (N)
Palestinian Medical complex (PMC)	Ramallah	40
Rafidiah hospital	Nablus	20
Al-Watani hospital	Nablus	19
Dr Khalil Suliman hospital	Jenin	14
Thabit Thabit governmental hospital	Tulkarm	21
Tubas Turkish hospital	Tubas	l9
Dr. Darwish Nazzal governmental hospital	Qalqilia,	10
Jericho governmental hospital	Jericho.	12
Yaser Arafat governmental hospital	Salfit	12
Beit Jala governmental hospital (Alhussain)	Bethlehem	17
Hebron governmental hospital (Alia)	Hebron	28
Yatta governmental hospital14	Yatta-Hebron	14
Domeh hospital	Al Dahryia –Hebron,	8
Mohammad Ali Almohtaseb	Hebron	14
Total		248

3.4 Study Period

The study conducted in the year 2021.

3.5 Population and Sampling

This study included all nurses who work in government hospitals at the emergency department. The population of the study was 248 nurses who work in emergency departments.

Inclusion criteria

- Nurses who are working in a government hospital in the emergency department.
- Having at least six months of working experience at the emergency departments.

Exclusion criteria

- Nurses who are working in other departments.

3.6 Data Collection Process

After obtaining approval from the Arab American University Palestine and Palestinian Ministry of health (MOH), the researcher contacted each nursing administrator in the targeted hospitals to present the purpose of the study and take the list of nurses in the hospitals.

The questionnaires were distributed face by face contact at each hospital. Participants assigned the informed consent which was on the first page of the questionnaire.

3.7 Data Collection Tool

A questionnaire was used to assess the factors influencing clinical decision making among nursing at the emergency departments, it consisted of the following parts:

3.7.1 Section One: Characteristics of participants

It includes age, gender, educational level, work shift, experience in nursing, and experience in the emergency department.

3.7.2 Section Two: Clinical Decision Making in Nursing Scale

The Clinical Decision Making in Nursing Scale (CDMNS) was developed by (Jenkins, 1983). This scale describes the perception of nursing in clinical decision-making based on self-expression. The initial CDMNS is composed of 40 items and four

subscales. For this research, only 40 items were included in the study. Each item of the scale is assessed through the five-point Likert scale (5) Always, (4) frequently, (3) occasionally, (2) Seldom, and (1) Never (Jenkins, 1983).

The minimum and maximum points to be taken are 40 and 200 on the whole scale. A high score taken from the scale indicates that the perception in decision making is high, whereas a low score indicates that the perception in decision making is low (Jenkins, 1983).

The internal consistency reliability of the CDMNS was established with a sample of nursing students and yielded a Cronbach's alpha coefficient of 0.83 (Cowin, Craven, Johnson & Marsh, 2006), and as a result, it has been used in over ninety research studies so far (Canova, Brogiato, Roveron & Zanotti, 2016; Girot, 2000)

3.8 Pilot Study

According to (Creswell, 2013) a pilot study refers to a method used to examine the design/methods of instrumentation prior to the actual research. This method contains initial testing of data collection instruments and processes to identify and rectify errors (Kangu, 2017). In other words, the pilot study aims to obtain feedback from the respondent on the clarity and conciseness of the questionnaire items and contents.

The piloting was carried out on 20 participants who met inclusion criteria randomly selected after the ethical approval got from Arab American University and the MoH and prior to proceeding with the actual study. The purpose of pilot study was to assess the feasibility, delivery procedure, clarity, readability and scale comprehension, and the time needed to finish the questionnaires. The participants indicated that they had

no trouble in interpreting or clarifying the contents of the instruments. The pilot study found that the average time taken to complete the questionnaire 10-20 minutes to 16 minutes on average. Regarding the sample of participants in this pilot study, the reliability of the internal consistency (Cronbach's alpha) is high and amounts to 0.81 for the whole scale.

3.9 Ethical Considerations

Ethical approval was obtained from Arab American University and the Palestinian Ministry of Health (Appendix B). A consent form was provided to every participant prior to the study. 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, enough time was given for questions.

3.10 Statistical Analysis

Statistical analysis was performed using Statistical Package for Social Sciences (SPSS version 21). Mean ± standard deviation was computed for continuous data. Frequencies and percentages were calculated for categorical variables. Moreover, t-test and one-way ANOVA, Pearson correlation were used. A p-value of less than 0.05 was considered to be statistically significant for analyses.

CHAPTER FOUR:

RESULTS

4.1 Overview

This chapter deals with the data collected for analysis. The statistical method allowed the investigator to deduce, analyze, coordinate, measure, evaluate and convey the numerical information. The aim of data analysis is to provide answers to questions about the study. The data analysis strategy comes directly from the question, the design and the data collection process and the level of measurement of the data. This chapter edits, tabulates, analyzes and interprets the data collected.

This chapter expresses the findings concerning to the purpose of this study was to assess the factors influencing Nurses' Clinical Decision-Making in emergency department of West Bank's hospitals in Palestine. Statistical analyses were directed to explore six research questions:

1. Is nurses' perception of clinical decision-making high among nurses in emergency departments?
2. Is there significant differences between demographic characteristics and patients' perception of clinical decision-making mean scores among nurses in emergency departments?
3. Is there a significant relationship between age and patients' perception of clinical decision-making mean scores among nurses in emergency departments?

4. Is there significant differences between work characteristics and patients' perception of clinical decision-making mean scores among nurses in emergency departments?
5. Is there a significant relationship between the number of patients and patients' perception of clinical decision-making mean scores among nurses in emergency departments?
6. What are the factors that influence nurses' clinical decision-making in emergency departments?

4.2 Response Rate

The nurses in the current study composed of all nurses working in the emergency departments of the governmental hospitals in West Bank/ Palestine. Two hundred and twenty seven out of 248 questionnaires (91.5% response rate) were completed and returned by the nurses. From an organizational point of view the response rate obtained for this research was very good; as such the findings should include more reflective details about the nursing population.

4.3 Participants' Characteristics

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 remaining were females. Further, approximately 174 (76.7%) had a Bachelor degree in nursing. Table 4-1 showed these demographic characteristics of the nurses.

Table 4-1: 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)
Nursing Degree: Education	Diploma		39(17.2)
	Bachelor		174(76.7)
	Master and above		14(6.2)

M= Mean, SD standard deviation

Also, the findings revealed that 104 (45.8%) of the participants had 3 -10 years' experience in nursing and slightly more 105 (46.3%) had same experience in emergency department. Most of the participants 209(92.1%) reported that they work rotation shift. The participants also reported that 17.8(SD=6.2) the average number of patients were care on the current or last shift that worked. Table 4-2 showed these work related characteristics of the nurses

Table 4-2: Distribution of work related characteristics among Nurses (N=227)

Characteristics		M (SD)	n (%)
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	Day		7(3.1)
	Evening		1(0.4)
	Night		10(4.4)
	Rotation		209(92.1)
Number of patients		17.8(6.2)	

In addition, the analysis revealed that most of the participants 187(82.38%) were astaff nurses, as seen in figure (4-1).

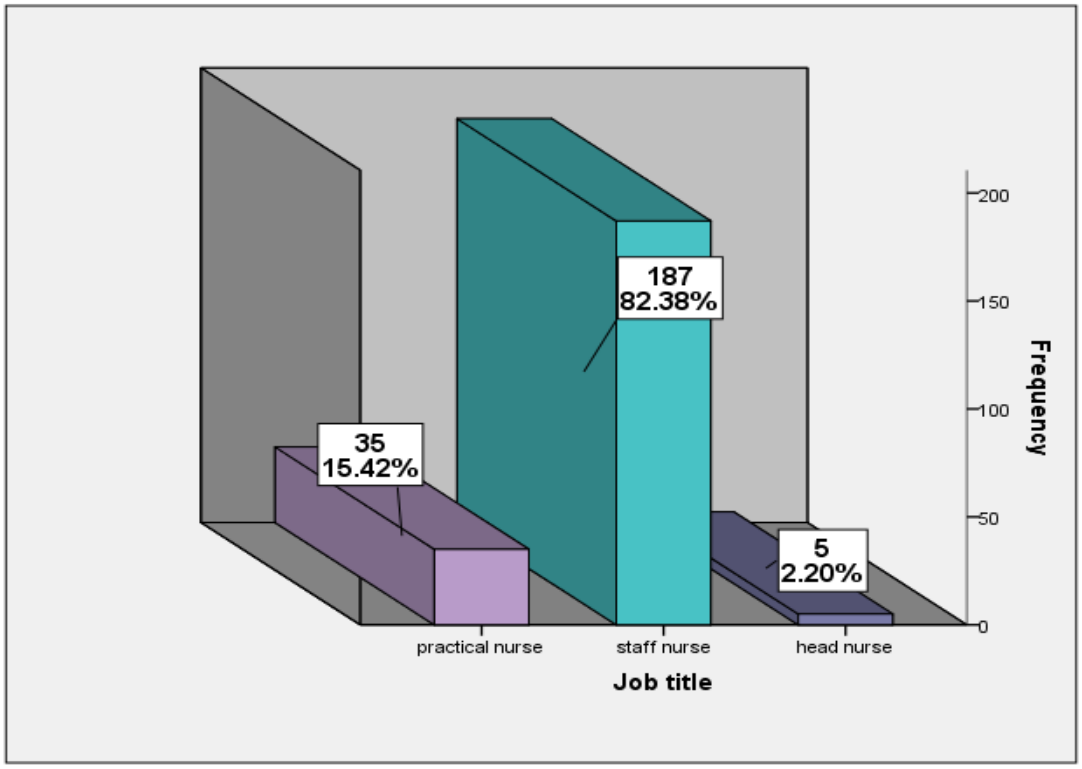

Figure 4-1: Distribution of the participants according to Job title (N=227)

4.4 Cronbach's Alpha for Scales

For each of the subscales, Cronbach's Alpha was calculated for clinical decision making. Table 3 shows there was an alpha above 0.80 in all ratings.

Table 4-3: Cronbach's Alpha for clinical decision making

	Cronbach's Alpha	Number of Items
Clinical decision-making total score	0.88	40
search for alternatives or options	0.90	10
canvassing of objectives and values	0.89	10
evaluation and reevaluation of consequences	0.86	10
search for information and unbiased assimilation of new information	0.88	10

4.5 Description of Clinical Decision Making

Table 4-4 showed descriptive analysis for the total and subscale scores of the perception of clinical decision making.

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

Table 4-4: 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)

4.6 Clinical Decision Making and Demographic Characteristics

Analysis of variance (ANOVA), independent t test, and Pearson correlation test were performed to compare the mean score of the clinical decision making and demographic characteristics: age, gender, and education degree. The analysis revealed that there was no significant differences between gender and clinical decision making scores mean ($p>0.05$). Also, there was no significant relationship between age and clinical decision making scores mean ($p>0.05$). However, there was a significant difference between education degree and clinical decision making scores mean ($p<0.05$), as seen in table 4-6.

Table 4-5: statistical analysis of clinical decision making Mean sores and demographic Characteristics (N=227)

Variable		N	M (SD)	Statistical Test	P- value
Gender	Female	106	3.3(0.24)	t (225)=0.835	0.404
	Male	121	3.3(0.23)		
Degree	Diploma	39	3.2(0.20)	F(2,224)= 9.4	0.000*
	Bachelor	174	3.3(0.23)		
	Master and above	14	3.4(0.21)		
Age				r=0.035	0.597

** Significant at the 0.05 level.*

A Tukey post hoc test showed that the Diploma degree nurses have perception of clinical decision making statistically significantly less than the bachelor and master and above ($p < 0.05$), as seen in table (4-6).

Table 4-6: Post hoc test analysis of clinical decision making Mean sores and education degree (N=227)

(I) nursing degree	(J) nursing degree	Mean Difference (I-J)	Sig.	95% Confidence Interval	
				Lower	Upper
Diploma	Bachelor	-0.16529*	.000	-.2600	-.0706
	Master and above	-0.22038*	.006	-.3869	-.0539
Bachelor	Diploma	0.16529*	.000	.0706	.2600
	Master and above	-0.05509	.656	-.2036	.0934
Master and above	Diploma	0.22038*	.006	.0539	.3869
	Bachelor	0.05509	.656	-.0934	.2036

** Significant at the 0.05 level.*

4.7 Clinical Decision Making and Work Related Characteristics

Analysis of variance (ANOVA) and Pearson correlation test were performed to compare the mean score of the clinical decision making and work related characteristics: job title, experience, experience in emergency department, and number of patients were care on the current or last shift that worked. The analysis revealed that there was no significant differences between both experience and experience in emergency department and clinical decision making scores mean ($p>0.05$). Also, there was no significant relationship between numbers of patients were care on the current or last shift that worked and clinical decision making scores mean ($p>0.05$).

However, there was a significant difference between job title and clinical decision making scores mean ($p<0.05$), as seen in table 4-7.

Table 4-7: statistical analysis of clinical decision making Mean sores and work related Characteristics (N=227)

Item	Variable	N	M (SD)	Statistical Test	p-value
Job title	practical nurse	35	3.2(.24	F(2,224)= 8.160	.000
	staff nurse	187	3.3(.23		
	head nurse	5	3.1(.12		
Experience	6 months to 2 years	47	3.3(.24)	F(2,224)= 1.485	.229
	3 years to 10 years	104	3.3(.25)		
	more than 10 years	76	3.4(.21)		
Experience in Emergency department	6 months to 2 years	56	3.3(0.22)	F(2,224)= 2.162	.118
	3 years to 10 years	105	3.3(0.25)		
	more than 10 years	66	3.4(0.26)		
Work shift	Day	7	3.1(0.14	F(3,223)= 2.589 .	.054
	evening	1	3.5(0.0)		
	night	10	3.3(0.16		
	rotation	209	3.3(0.24		
Number of patients				r=.128	.055

** Significant at the 0.05 level.*

A Tukey post hoc test showed that the staff nurses have perception of clinical decision making statistically significantly more than practical nurses ($p < 0.05$), as seen in table (4-8).

Table 4-8: Post hoc test analysis of clinical decision making Mean sores and work related characteristics (N=227)

(I) job title	(J) job title	Mean Difference (I-J)	Sig.	95% Confidence Interval	
				Lower	Upper
practical nurse	staff nurse	-.15259*	.001	-.2515	-.0537
	head nurse	.05214	.881	-.2047	.3090
staff nurse	practical nurse	.15259*	.001	.0537	.2515
	head nurse	.20473	.118	-.0387	.4482
head nurse	practical nurse	-.05214	.881	-.3090	.2047
	staff nurse	-.20473	.118	-.4482	.0387

** Significant at the 0.05 level.*

4.8 Factors Affecting Clinical Decision Making

The predictors of clinical decision making among nurses after adjusting demographic characteristics. All assumptions were met for linear regression.

Results from linear regression analyzes found that nursing degree and work hours accounted for 11.7% of the clinical decision making variance (Model 1) (Table 4-9).

Table 4-9: Predictors of clinical decision making among nurses in emergency departments

Model	B	Beta	t	Sig.	95.0% Confidence Interval for B	
					Lower Bound	Upper Bound
Age	.006	.163	1.568	.118	-.001	.013
Gender	-.036	-.077	-1.205	.230	-.095	.023
Nursing degree	.194	.390	4.156	.000	.102	.286
Job title	-.016	-.027	-.290	.772	-.125	.093
Past experience in health care	-.039	-.120	-.836	.404	-.130	.053
Experience in Emergency	-.004	-.012	-.088	.930	-.090	.082
Work hours	.090	.216	3.056	.003	.032	.148
Patients	.004	.099	1.436	.152	-.001	.009

Note. Model 1. $R^2 = 0.148$, adjusted $R^2 = 0.117$, F-statistic = 4.752, df = 8

4.9 Summary of Findings

This chapter presented the analysis of the results. The analysis used mean, standard deviation, frequency and percentage. Also, to find the differences between the variable the analysis used ANOVA and t test. In addition, to find the relationship between the continuous variable the analysis used Pearson correlation test. The average score for the total clinical decision-making score was 3.3(SD=0.23). There was a significant difference between education degree and clinical decision making scores mean ($p<0.05$). Also, there was a significant difference between job title and clinical decision making scores mean ($p<0.05$). Nursing degree and work hours were predictors of clinical decision making. The next chapter will discuss the findings of this analysis.

CHAPTER FIVE:

DISCUSSION, CONCLUSION, AND RECOMMENDATIONS

5.1 Introduction

In this chapter, discussion, conclusions, and recommendations were explained. The conclusion was formulated according to the purpose of the study. The purpose of this study was to assess the factors influencing Nurses' Clinical Decision-Making in emergency department of West Bank's hospitals in Palestine.

5.2 Discussion

Decision making is described in the literature interchangeably and uses a number of terms such as clinical judgment, decision making and clinical reasoning. While these terms are used interchangeably, they have been described as a choice made by a practitioner from a number of alternatives (Hancock, and Durham, 2007) (p. 16).

Nurses in critical care areas make many critical decisions. Although the professional role of nurses has extended and become more responsible, these added responsibilities serving for wider decision making (Hancock, and Durham, 2007). Patients in emergency care units are seriously ill and frequently unstable and their health changed rapidly (Darawad et al., 2014). These changes require the nurses to make decisions in a limited period of time (Buchnall, 2000).

In the current study the average score for the total clinical decision-making score was 3.3(SD=0.23) which is high above three. The average scores for three 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), canvassing of

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

These results were congruent with the study conducted by Mohamed (2018) which concluded that nurses had a high agreement on total perception of respondents about clinical decision-making. Also, these results were supported with the findings of Bittencourt and Crossetti (2013) who reported that critical thinking and reasoning had high rankings in their study

In contrast with the present findings, Salehi et al. (2010)] and Noohi, Karimi-Noghondar & Haghdoost (2012) found a low mean score of critical thinking skills among nurses. Also, these results were incongruent with the study conducted by Shahraki, Manzari & Ghandehari (2017) which concluded that nurses were acquired the highest score in the phase of present and evaluation of alternative solutions and lowest score in the phase of implement the solution.

5.2.1 Clinical decision making and demographic characteristics

The study indicated that there were no relationships among age, gender and clinical decision making. Only, there was a significant difference between education degree and clinical decision making.

There are few studies that report on the relationship between gender and decision making. Burke and Miller (2005) found no evidence for a gender-based stereotype of women's intuition in the field of human interactions and management. According to 51 interviews with seasoned professionals, males are regarded to employ intuitive talents at

work as much as or more than women. In contrast, males chose rational thinking over intuitive reasoning in a survey of 520 doctors, nurses, and health managers (Sladek, Bond, & Phillips, 2010).

Regarding age, the current finding was inconsistent with previous study in Iran conducted by Mirsaeedi, et al (2012) who found that age, ward, and experience had a significant difference with nurses' clinical decision making. Also, Bjørk & Hamilton (2011) realized that expanded use of intuitive models of CDM was correlated with further education, years in job, age, and working in surgical units.

According to education degree, other previous studies supported the current findings. The present findings were consistent with study of Wu et al. (2016) who found that nurses' educational level had significant effect on nurses' clinical decision making. Also, nurses from four-year programs called for emergency response teams more frequently than nurses from two-year programs as required (Pantazopoulos, et al., 2012).

These results were congruent with the study conducted by Ahmed & Safadi (2013) which was conducted to identify if there is dissonance between nurses actual and preferred decisional involvement. The study concluded there were no correlation among age, gender, and actual decisional involvement among study sample.

5.2.2 Clinical decision making and work related characteristics

The analysis revealed that there was no significant differences among experience and experience in emergency department and clinical decision making.

The present findings were inconsistent with study of Wu et al. (2016) who found that nurses' experience had significant effect on nurses' clinical decision making. Another study conducted by (Dorgham & Al-Mahmoud, 2013) found positive association between nurse's experience and decision-making. Also, Keshk, Qalawa, & Aly (2018) found that nurses with more than 6 years' experience making advance clinical decision. Moreover, Pretz & Folse (2011) reported that general nursing tendency to use intuition in clinical practice decision-making improved with experience.

These results were congruent with the study conducted by Ahmed & Safadi (2013) that concluded there were no correlation among years of experience and actual decisional involvement among study sample.

According to job title, there was a significant difference between job title and clinical decision making. This finding was congruent with the study conducted by Lee et al. (2020) that concluded there were no correlation between clinical decision making and job ranking.

5.2.3 Factors that influence decision making among nurses

The current study finding 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. (2016) 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. (2004) that 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, Gizaw et al. (2018) found that commitment, authority and autonomy, ongoing supervision and feedback, and good communication facilitate clinical decision-making practice, whereas patient-nurse ratio, poor resource management, structure and culture of the health care system, low self-confidence, lack of professional development, and level of knowledge inhibit clinical decision-making practice among study participants.

5.2.4 Limitations of the study

Although the sample size in this study was substantial, the survey approach has drawbacks since questionnaire responses may not accurately reflect nurses' real decision-making. 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.

5.3 Conclusions

In general, this study confirmed the average score for the 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. In addition, the study indicated that there were significant differences between each of education degree and job title with clinical decision making scores. However, the study indicated that there were no significant differences between each of general experience and experience in Emergency department with clinical decision making scores. Also, there was no significant relationship between numbers of patients were care on the current or last shift that worked and clinical decision making scores.

5.4 Recommendations

Based on the results of the current study, the researcher recommends the following:

- 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.
- Continuous in-service training helps broaden nurses' knowledge base, as well as continual supervision and feedback
- Further quantitative and qualitative research should be conducted to acquire a better understanding of clinical decision making among nurses in emergency department.
- Replication of the study with a larger sample size, including multiple sites, to produce a more diverse subject pool and increase the generalizability of the study.

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Appendix A: Questionnaire

The Factors Influencing Nurses' Clinical Decision-Making in the emergency department: Nursing perspective

Section One: Characteristics of participants

- **Age _____**

- **Gender**
  - Female
  - Male

- **Nursing degree:**
  - Diploma
  - Bachelor
  - Master or higher

- **Job Title/Role:**
  - Practical nurse
  - Staff nurse
  - Head Nurse

- **Professional experience:**

    - Less than 6 months
    - From 6 months to 2 years
    - From 3 years to 10 years
    - More than 10 years

- **Years of experience on the current unit (Emergency Department)**

    - Less than 6 months
    - From 6 months to 2 years
    - From 3 years to 10 years
    - More than 10 years

- **Work hours** (check the one that is most descriptive of the hours you work)

    - Days
    - Evenings
    - Nights
    - Rotates between days, nights, or evenings

- On the current or last shift that you worked, how many patients did you care for?

    _____

Sections Two: Clinical Decision Making in Nursing Scale

For each statement, please select the frequency that mostly fits with you by putting (X) in the box *Note:* Be sure you respond in terms of what you are doing in the clinical setting *at the present time*.

No.	*Item*	***Never***	***Seldom***	***Occasionally***	***Frequently***	***Always***
1.	If the clinical decision is vital and there is time, I conduct a thorough search for alternatives.					
2	When a person is ill, his or her cultural values and beliefs are secondary to the implementation of health services.					
3	The situational factors at the time determine the number of options that I explore before making a decision.					
4	Looking for new information in making a decision is more trouble than it's worth					
5	I use books or professional literature to look up things that I don't understand.					
6	A random approach for looking up options works best for me.					
7	Brainstorming is a method I use when thinking of ideas for options.					
8	I go out of my way to get as much information as possible to make decisions.					
9	I assist clients in exercising their rights to make decisions about their own care.					
10	When my values conflict with those of the client, I am objective enough to handle the decision-making required for the situation.					
11	I listen to or consider expert advice or judgment, even though it may not be the choice I would make.					
12	I solve a problem or make a decision without consulting anyone, using information available to me at the time.					
13	I don't always take time to examine all the possible consequences of a decision I must make.					
14	I consider the future welfare of the family when I make a					

No.	*Item*	***Never***	***Seldom***	***Occasionally***	***Frequently***	***Always***
	clinical decision that involves the individual.					
15	I have little time or energy available to search for information.					
16	I mentally list options before making a decision.					
17	When examining the consequences of options I might choose, I generally think through If I did this, then…					
18	I consider even the remotest consequences before making a choice.					
19	The consensus among my peer group is important to me in making a decision.					
20	I include clients as sources of information.					
21	I consider what my peers will say when I think about possible choices I could make.					
22	If a senior nurse recommends an option to a clinical decision-making situation, I adopt it rather than searching for other options.					
23	I search for new information randomly.					
24	If a benefit is really great, I will favor it without looking at all the risks					
25	My past experiences have little to do with how actively I look at risks and benefits for decisions about clients.					
26	When examining the consequences of options I might choose, I am aware of the positive outcomes for my client.					
27	I select options that I have used successfully in similar circumstances in the past.					
28	If the risks are serious enough to cause problems, I reject the option.					
29	I write out a list of positive and negative consequences when I am evaluating an important clinical decision.					
30	I do not ask my peers to suggest options for my clinical decisions.					
31	My professional values are inconsistent with my personal values.					
32	My finding of alternatives seems to be largely a matter of luck.					
33	In the clinical setting, I keep in mind the course objectives for the day's experience.					

No.	*Item*	***Never***	***Seldom***	***Occasionally***	***Frequently***	***Always***
34	The risks and benefits are the farthest things from my mind when I have to make a decision.					
35	When I have a clinical decision to make, I consider the institutional priorities and standards.					
36	I involve others in my decision-making only if the situation calls for it.					
37	In my search for options, I include even those that might be thought of as far out or not feasible.					
38	Finding out about the client's objectives is a regular part of my clinical decision-making.					
39	I examine the risks and benefits only for consequences that have serious implications.					
40	The client's values have to be consistent with my own for me to make a good decision.					

THANK YOU FOR YOUR PARTICIPATION!

Appendix B: Institution Review Board (IRB)

State of Palestine
Ministry of Health
General Directorate of Education in
Health and Scientific Research

دولة فلسطين
وزارة الصحة
الإدارة العامة للتعليم الصحي
والبحث العلمي

Ref.: .....
Date:.....

الرقم: ٢٠٢١/١٥٨٥/١٢٤
التاريخ: ٢٠٢١/٠٩/١٤

الأخ مدير عام الادارة العامة للمستشفيات المحترم ،،،

الأخ مدير مجمع فلسطين الطبي المحترم،،،

تحية واحترام،،،

الموضـــوع: تسهيل مهمة بحث

يرجى التكرم بتسهيل مهمة الطالب: **احمد يحيى ابو عرة، ماجستير تمريض الطوارئ– الجامعة العربية الامريكية**، لعمل بحث بعنوان:

"العوامل المؤثرة سريرياً على اتخاذ القرارات العلاجية لدى ممرضي الطوارئ من وجهة نظر الممرضين"

حيث سيقوم الطالب بجمع معلومات من خلال تعبئة استبانة من قبل الكادر التمريضي في اقسام الطوارئ (بعد اخذ موافقتهم)، مع العلم أن مشرف الدراسة: د. احمد جمعه العايد.

وذلك في: **جميع مستشفيات الضفة الغربية والمجمع الطبي**

على ان يتم الالتزام بجميع تعليمات واجراءات الوقاية والسلامة الصادرة عن وزارة الصحة بخصوص جائحة كورونا، وتحت طائلة المسؤولية.
على ان يتم تزويد الوزارة بنسخة PDF من نتائج البحث، التعهد بعدم النشر.

مع الاحترام،،،

د. عبد الله القواسمي
مدير التعليم الصحي والبحث العلمي

نسخة: عميد كلية الدراسات العليا المحترم/ الجامعة العربية الامريكية

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Appendix C: Consent Form

Factors Influencing Nurse's Clinical Decision-Making for the Management of Emergency Care: Nurses' perspective

Consent Form

My name is Ahmed Abu Arra, I'm a postgraduate student at Arab American University-Ramallah. I invite you to participate in this research study. The study is carried out as a part of fulfilling the requirement for a Master's degree in Emergency Nursing. This study aims to assess the Factors Influencing Clinical Decision Making in the Emergency Department from Nurses Prospective in emergency rooms of West Bank governmental hospitals. Therefore, this self –administered questionnaire for nurses who are working in the emergency rooms to assess and evaluate the relationship between their demographic data and their decision making and this study can help determine the real value of clinical decision making in the emergency department. Your effective participation has it is own importance for clinical decision making and can aid in the development of quality improvement approaches to minimize reduced care and improve patient outcomes. In addition, further attempts can be made by hospital administrators to improve nurses' clinical reasoning and satisfaction. This questionnaire needs less than 30 min. Names are not required. Your participation in this study is voluntary and you are free to withdraw your participation at any time. The information in this study will only be used for research purposes. Participant privacy and confidentially will be completely protected, no identifiers or personal information will be collected or stored including participant's name, ID, and others, kindly append your signature below.

Declaration: I accept that I have read and understood the above explanation and I'm willing to participate in this study voluntarily.

-Participant's signature …….

Thank you for your cooperation,

For any inquires please contact: Ahmad Abu Arra, 0598-580978.

الملخص

المقدمة: اتخاذ القرار المناسب أمر بالغ الأهمية في حالات الطوارئ. إنه عنصر أساسي في الرعاية التمريضية المهنية ، وقدرة الممرضات على اتخاذ قرارات سريرية فعالة هي العامل الأكثر أهمية الذي يؤثر على جودة الرعاية. يتم تصنيف العوامل التي تؤثر على صنع القرار من قبل الممرضات إلى أربعة مجالات. وهي خصائص الممرضات والعوامل التنظيمية وخصائص المريض والعوامل البيئية. تم تحديد خصائص الممرضات مثل الخبرة التمريضية، والمعرفة السريرية ، والعوامل الديموغرافية للممرضات، والاستقلالية والمواقف الفردية حول رعاية المرضى. كان الغرض من هذه الدراسة هو تقييم العوامل التي تؤثر على اتخاذ الممرضات للقرارات السريرية في قسم الطوارئ في مستشفيات الضفة الغربية في فلسطين.

المنهجية: كانت الدراسة عبارة عن دراسة مقطعية. وكان السكان المستهدفون هم جميع الممرضات العاملات في أقسام الطوارئ في المستشفيات الحكومية في الضفة الغربية ، فلسطين. أجريت الدراسة على 227 ممرضة وتم جمع البيانات باستخدام مقياس اتخاذ القرار السريري في التمريض.

النتائج: أوضحت نتائج الدراسة أن متوسط الدرجة لمجموع درجات اتخاذ القرار السريري كان 3.3 .(SD = 0.23) وجدت نتائج تحليل الانحدار الخطي أن درجة التمريض وساعات العمل تمثل 11.7٪ من تباين اتخاذ القرار السريري.

الاستنتاج: أكدت الدراسة أن متوسط درجة اتخاذ القرار السريري كان أعلى قليلاً من متوسط الدرجة. كما بينت الدراسة أن درجة التمريض وساعات العمل كانتا منبئات اتخاذ القرار السريري بين الممرضات في أقسام الطوارئ.

الكلمات الدالة: صنع القرار السريري، الدراسات الشاملة لعدة قطاعات، خدمة الطوارئ، المستشفيات، رعاية المرضى