

Nurses' Performance Regarding Holistic Assessment of Emergency Patients at Kafr Sakr Central Hospital

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Abstract

Background: Holistic nursing assessment of emergency patients continues to be a challenge for all levels of critical care nurses. Patients with multi-system dysfunction in particular, present complicated clinical challenges that demand care based on nurses performance and understanding of patients' physiological, psychosocial and spiritual needs. **Aim of the study** was to assess nurses' performance regarding holistic assessment of emergency patients at kafr sakr central hospital. **Design:** A descriptive exploratory research design was used in this study. **Setting:** The study was conducted at emergency department of Kafr Sakr Central Hospital. **Subjects:** A Convenient sample of all available nurses (no=50 nurses). **Tools:** Two tools were used in the study included, tool 1: nurses' self administered interview questionnaire and tool 2: nurses' practice observational checklist. **Result:** 76% of studied nurses had satisfactory knowledge regarding holistic assessment of emergency patients, in addition 66% of studied nurses had competent practice regarding holistic assessment of emergency patients. There was a highly statistically positive correlation between total knowledge and practice regarding holistic assessment of emergency patients among the studied nurses. **Conclusion:** current study clarifies that, there was nearly three quarters of studied nurses had satisfactory knowledge while two thirds of studied nurses had competent practice regarding holistic assessment of emergency patients. In addition, there was a highly statistically positive correlation between knowledge and practice regarding holistic assessment of emergency patients among the studied nurses. **Recommendations:** Developing ongoing in-service educational and training program to improve nurses' knowledge and practices regarding holistic assessment of emergency patients.

Keywords: *Emergency patients; Holistic assessment; Nurses performance.*

Introduction:

Health assessment, a core competency in nursing practice, constitutes subjective and objective data, collected through holistic health history and physical assessment. The ability to effectively perform a health assessment is fundamentally imperative for quality nursing care planning, nursing interventions, and patient care. The benefits of holistic assessment include overall enhancement in a person's well-being, resulting in increased quality of life and reduced medical costs (*Wilson, et al., 2022*).

The term "holistic" in the context of medicine refers to comprehensively viewing physiological, interpersonal, societal, environmental, and spiritual signals from a human being. Holistic care involves holistic assessment, which assesses patients from these dimensions in a longitudinal perspective. For example, a healthcare professional can holistically assess a patient by exploring their interpersonal relationships to determine whether they receive sufficient emotional support, and by examining their living conditions for any

potential allergens that could trigger an asthma attack. So each non-medical factor is defined as a social determinant of health (*Amanian, et al., 2020*).

Clinical practice further identified patients frequently emphasizing their preference to be cared for as a person and not as objects. Part of caring for the person instead of the patient is to perform a holistic physical assessment that honors the whole human, their lived experiences, and preferences, based on a humanistic and caring perspective in which the human being is viewed as an entity consisting of body, soul, and spirit with varying nursing needs (*Adams, et al., 2024*).

Standard physical assessments routinely performed in a head-to-toe (H2T) order, often start with the most invasive assessments, the respiratory and cardiac systems assessment, and conclude with the neurological system assessment. patient assessment generally focuses on patients' physical and biomedical status by using the A-E principle (airway, breathing, circulation, disability, and exposure), observing vital signs, and listening to the patient's perceived symptoms of illness or injury (*Huber, et al., 2022*).

Emergency department (ED) is one of the most important and stressful units in hospitals where seconds count in giving emergency care and saving patients' lives. Nurses' task is to alleviate patients' suffering and promote well-being. In ED, which involve life-threatening, urgent and non-urgent care situations, patients are more exposed, dependent, and vulnerable than in other care situations. This constitutes a challenge for emergency nurses to address issues related to patient assessment, participation, and influence over care (*Falchenberg, et al., 2021*).

In emergency care, nurses face challenges when they assess patients with different symptoms, signs, and conditions to determine patients' care needs. Assessing patients, determining whether their conditions are stable or unstable, and defining care needs are important tasks for emergency nurses. Failure to assess patients according to their individual care needs may lead to undesired consequences, such as incomplete nursing care and adverse health events (*Wolf et al., 2020*).

Significance of the study:

Emergency care is critical to the attainment of universal health coverage. It provides an integrated platform for the assessment of patients with acute illness and injury and has the potential to address a substantial proportion of the disease burden in low- and middle-income countries (LMICs) Over 50% of annual deaths in LMICs could be averted through access to high-quality emergency care (*Hirner, et al., 2023*). In LMICs, 134 million adverse events occur annually and 2.6 million deaths, because of unsafe care (*Wiseman et al., 2023*).

Egypt carries the heaviest burden of injuries in the Middle East with high rates of injuries. The disability-adjusted life years caused by injuries in Egypt reached 4000 years/100,000 people, the years lived with disability represented 6% and years of life lost represented 15% attributed to injuries (*Arafa et al., 2019*). The global prevalence of trauma-related mortality ranges from 2% to 32%; however in Egypt, it reaches 8% (*Elbaih, et al., 2023*).

Unfortunately, emergency nurses work in a demanding atmosphere and under pressure, which could have an impact on both their ability to offer excellent emergency treatment and their willingness to stay in institutions to continue providing care. The work of emergency nurses is emotionally taxing due to the fact that they are also exposed to workplace violence, crowding, fatalities, and other traumatic situations (*Wolf et al., 2020*).

Providing holistic care based on holistic assessment to patients is more important than solely addressing medical issues. However, in the current medical environment, holistic assessment is not being initiated vigorously due to medical costs and a shortage of healthcare professionals. Patients of all ages and acuities who are frequently undiagnosed and undifferentiated receive holistic assessment and care from emergency nurses (*Curtis et al., 2020*). So that, The study was conducted to assess nurses' performance regarding holistic assessment of emergency patients in emergency department at Kafr Sakr Central Hospital.

Aim of the study:

The study aimed to assess nurses' performance regarding holistic assessment of emergency patients in emergency department at Kafr Sakr Central Hospital.

through the following objectives:

- 1) Assess nurses' level of knowledge regarding holistic assessment of emergency patients.

- 2) Assess nurses' level of practices regarding holistic assessment of emergency patients.

Research Questions:

- 1) What is the nurses' level of knowledge regarding holistic assessment of emergency patients?
- 2) What is the nurses' level of practices regarding holistic assessment of emergency patients?

Subjects and Methods:

Research design:

A descriptive exploratory research design was used to conduct this study.

Study Settings:

The study was carried out at emergency department of Kafr Sakr Central Hospital.

Sampling:

Convenient sample of all available nurses (no=50 nurses) from both genders and different educational levels in the previous mentioned setting who accepted to participate in the study.

Tools of data collection:

Two tools were utilized to collect study data:

First Tool: Nurses' Self Administered Interview Questionnaire:

It was developed by the investigator and was translated into Arabic language based on the recent, related literatures and scientific references (*Alrashedi et al., 2022 & Falchenberg, et al., 2021*) It was consisted of two parts:

Part one: Personal Characteristics of studied Nurses:

It included (Age, gender, marital status, educational level, years of experience in nursing and attending training courses).

Part two: Emergency Nurses' Level of knowledge regarding holistic assessment of emergency patients:

This tool consisted of 25 multiple choice questions to assess nurses' level of knowledge related to holistic assessment of emergency patients provided in the emergency department which included nurses knowledge about comprehensive patient evaluation, physical, and psychosocial assessment, pain scale, cultural competence in comprehensive assessment and prioritization of patients in the emergency department.

Scoring system for knowledge regarding holistic assessment of emergency patients :

- **Satisfactory level:** if score 70% or more.
- **Unsatisfactory level:** if score <70%.

Second Tool: Nurses' Practice Observational Checklist regarding holistic assessment of emergency patients :

This tool was adapted from (*Gilmour et al., 2022; Dai et al., 2020 & Royal College of Nursing, 2017*) to assess nurses' level of practices regarding holistic assessment of emergency patients. it included; (systematic patient assessment, pain assessment and management, caring for acutely ill patients, caring for patients requiring resuscitation, caring for patients with minor illness or injury, caring for people with mental health needs).

Scoring system for nurses' practice observational checklist regarding holistic assessment of emergency patients:

- **Competent:** if score 80% or more.
- **Incompetent:** if score <80%.

**Content Validity:**

The content validity was fulfilled for comprehensiveness, relevance, simplicity, clarity, and ambiguity through a jury of five experts from Adult Health Nursing Department, Faculty of Nursing, Helwan University (two assistant professor and three lecturer), and all recommended modifications were done.

Reliability:

Reliability was testing statistically to assure that the tool was reliable before data collection and to determine the extent to which the items of the tools were related to each other. Alpha Cronbach for knowledge was 0.813 "good" and for nurses' Competence was 0.865 "good".

Pilot study:

A pilot study was carried out on 5 nurses (10% of the sample) at emergency department of Kafr Sakr Central Hospital to examine the feasibility, clarity of questions and time needed to complete the study tools as well as to identify any possible obstacles that may impede data collection. Nurses included in the pilot study were excluded from the study sample, because some modifications were done in the tool after conducting the pilot study.

Fieldwork:

1. An approval was obtained from the Scientific Ethical Committee of the Faculty of Nursing at Helwan University, number 36 on 3 October 2023.
2. An official permission to conduct the proposed study was obtained from Kafr Sakr Central Hospital which the study was conducted.
3. Data collection was performed and completed over a period of six months from the beginning of November 2023 till the end of April 2024.
4. Each nurse was interviewed individually to gather the necessary data of the study and data collected by the investigator over three days per week (about one nurse each day). The required time to collect data from each nurse for about 60: 90 minutes for observational checklist and 20:40 minutes for self-administered questionnaire .
5. Observational checklist for assessment of nurses' practice regarding holistic assessment of emergency patients was filled by the investigator through indirect observation.
6. Self-administered questionnaire for assessment of nurses' knowledge regarding holistic assessment of emergency patients was filled by the nurses during their work.
7. The study subjects were assured that the information collected would be treated confidentially and that it would be used only for the study.

Administrative Design:

After explanation of the study aim and objectives, an official permission was obtained from the Dean of Faculty of Nursing in Helwan University and the general manager of Kafr Sakr Central Hospital asking for cooperation and permission to conduct the study. Collect the necessary data for current study after a brief explanation of the purpose of the study and its expected outcomes. Used proper channels of communication from authorized personnel.

Ethical Considerations:

An official permission to conduct the proposed study was obtained from faculty of nursing Helwan University from the Scientific Research Ethics Committee, number 36 on 3 October 2023. Participation in the study is voluntary and subjects were given complete full information about the study and their role before signing the informed consent. The ethical considerations included explaining the purpose and nature of the study, stating the possibility to withdraw at any time, confidentiality of the information where it was accessed by any other party without taking permission of the participants. Ethics, values, culture and beliefs were respected.

Statistical Analysis:

The statistical analysis of data was done by using the computer software of Microsoft Excel Program and Statistical Package for Social Science (SPSS) version 25. Data were presented using descriptive statistics in the form of frequencies and percentage for categorical data, the arithmetic mean (X) and standard deviation (SD) for quantitative data. Qualitative variables were compared using the chi square test (X²). In addition, R- tests were used to identify the correlation between the study variables.

Degrees of significance of results were considered as follows:

- P-value > 0.05 Not significant (NS)
- P-value < 0.05 Significant (S)
- P-value < 0.001 Highly Significant (HS).

Results:

Table (1): Frequency and percentage distribution of personal characteristics of the studied nurses (n=50):

Personal characteristics	N	%
Age		
20<30	30	60
30<40	18	36
≥40	2	4
Gender		
Male	4	8
Female	46	92
Marital status		
Single	8	16
Married	40	80
Divorced	2	4
Educational level		
Nursing diploma	2	4
Technical nursing diploma	39	78
Bachelor nursing degree	9	18
Nursing experience years		
<5 years	28	56
5 <10 years	18	36
10<15 years	2	4
≥ 15 years	2	4
Attended training courses about caring with emergency patients		
Yes	42	84
No	8	16

Table (1) represents personal characteristics of the 50 nurses included in the study. The nurses (60%) were aged between 20 and 30 years and only 4% were more than 40 years. The gender distribution was predominantly female 92%. 80% of nurses were married. Regarding educational qualifications, the majority held a technical nursing diploma 78%. In terms of nursing experience, more than half of the nurses 56% had less than 5 years of experience and only 4% had more than 15 years of experience. Additionally, 84% of the nurses had attended training courses related to caring for emergency patients.

Table (2): Frequency and percentage distribution of nurses' knowledge regarding holistic assessment of emergency patients(n=50):

Items	Correct		Incorrect	
	No	%	No	%
Concept of comprehensive patient evaluation	43	86	7	14
Primary purpose of comprehensive assessment in the emergency department	24	48	26	52
Component not taken in consideration when performing a comprehensive evaluation	45	90	5	10
Importance of evaluation of a patient's social and psychological factors during a comprehensive evaluation	50	100	0	0
Example of a psychosocial assessment question during a comprehensive assessment	48	96	2	4
During a comprehensive evaluation the patient's vital signs include	50	100	0	0
Factors may influence prioritization of patients in the emergency department	49	98	1	2
A comprehensive evaluation includes collaboration with any member of the health care team	49	98	1	2
Way by which comprehensive assessment contributes to patient-centered care	15	30	35	70
The role of cultural competence in comprehensive assessment	34	68	16	32
The ultimate goal of the healthcare team when performing a comprehensive assessment	26	52	24	48
A comprehensive assessment of emergency patients in the emergency department includes	41	82	9	18
Importance of comprehensive assessment in the emergency department	43	86	7	14
Items that should be consider during the comprehensive assessment for patient at the emergency department with a minor cut on his hand.	47	94	3	6

Table (2) reveals that, 100% correctly identified the importance of evaluating a patient's social and psychological factors during a comprehensive assessment and correctly recognized the components of vital signs during the evaluation. Furthermore, 98% of nurses were knowledgeable about factors influencing patient prioritization and the need for collaboration within the healthcare team. However, gaps in knowledge were noted in some areas, 30% of nurses understand how comprehensive assessments contribute to patient-centered care. 68% of nurses had knowledge about cultural competence in comprehensive assessment. There was also a 52% correct response rate regarding the primary purpose of a comprehensive assessment in the emergency department.

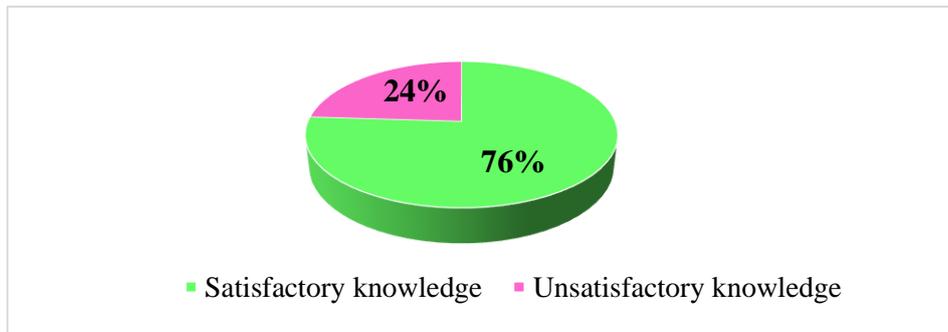


Figure (1): Percentage distribution of nurses' knowledge regarding holistic assessment of emergency patients (n=50).

Fig (1) illustrates that, **76%** of studied nurses had satisfactory knowledge, while **24%** of them had unsatisfactory knowledge regarding holistic assessment of emergency patients.

Table (3): Frequency and percentage distribution of nurses’ practices regarding holistic assessment of emergency patients (n=50):

Items	Adequate		Inadequate	
	No	%	No	%
Systematic patient assessment	35	70	15	30
pain assessment and management	37	74	13	26
Caring for acutely ill patients	36	72	14	28
caring for patients requiring resuscitation	48	96	2	4
Caring for patients with minor illness or injury	35	70	15	30
Caring for people with mental health needs	30	60	20	40

Table (3) presents that, 96% of nurses demonstrated adequate practice in caring for patients requiring resuscitation, the highest among all categories. Pain assessment and management followed closely, with 74% of nurses displaying adequate skills. However, only 60% of nurses demonstrated adequate competence in caring for people with mental health needs, highlighting a significant area for improvement.

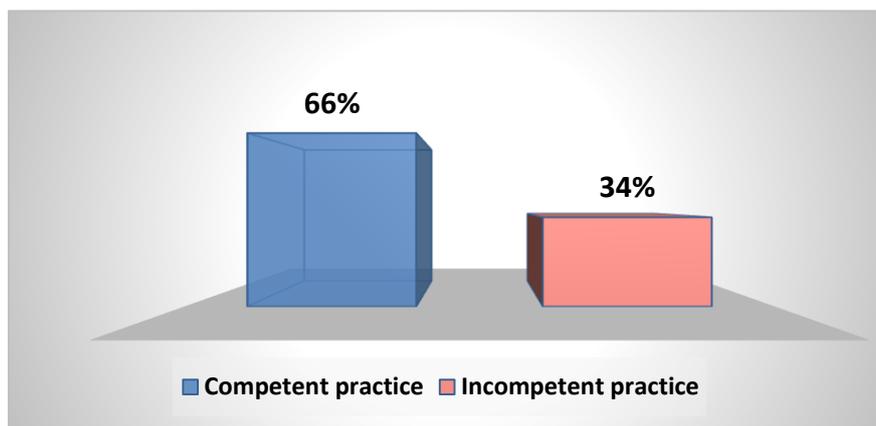


Figure (2): Percentage distribution of nurses’ practices regarding holistic assessment of emergency patients (n=50):

Fig (2) shows that, 66% of the nurses were rated as having competent practice, while 34% were rated as having incompetent practice regarding holistic assessment of emergency patients.

Table (4): Relation between personal characteristics of studied nurses and their knowledge regarding holistic assessment of emergency patients (n=50).

Items		Total knowledge regarding holistic assessment of emergency patients				X ²	P-Value
		Satisfactory N= 38		Unsatisfactory N= 12			
		N	%	N	%		
Age	20<30	20	40	10	20	16.34	.000**
	30<40	16	32	2	4		
	>40	2	4	0	0		

Gender	Male	3	6	1	2	1.26	.54
	Female	35	70	11	22		
Marital status	Single	6	12	2	4	2.95	.41
	Married	31	62	9	18		
	Divorced	1	2	1	2		
Educational level	Nursing diploma	0	0	2	4	6.54	.04*
	Technical nursing diploma	30	60	9	18		
	Bachelor nursing degree	8	16	1	2		
Nursing experience years	<5 years	20	40	8	16	11.42	.001**
	5 <10 years	14	28	4	8		
	10 <15 years	2	4	0	0		
	≥ 15 years	2	4	0	0		
Attended training courses about caring with emergency patients	Yes	37	74	5	10	13.74	.000**
	No	1	2	7	14		

*Significant at $p < 0.05$. **Highly significant at $p < 0.01$. Not significant at $p > 0.05$

Table (4) explains that, age shows a highly significant relation ($p = .000$), with younger nurses having higher levels of satisfactory knowledge 40% compared to older groups. Educational level also significantly influences knowledge ($p = .04$), with 60% of nurses holding a technical nursing diploma having satisfactory knowledge, while those with a nursing diploma had unsatisfactory knowledge 4%.

Nursing experience was also had a highly significant relation ($p = .001$) with nurses with less than 5 years of experience were more likely to have satisfactory knowledge 40% compared to those with more experience. The strongest correlation was found with training courses; nurses who attended emergency care training had significantly higher knowledge levels ($p = .000$), with 74% of them showing satisfactory knowledge. Other factors, such as gender and marital status, did not show statistically significant relationships with knowledge levels ($p > 0.05$).

Table (5): Relations between personal characteristics of studied nurses and nurses' practice regarding holistic assessment of emergency patients ($n=50$):

Items	Nurses 'practices regarding holistic assessment				X ²	P-Value	
	Competent N= 33		Incompetent N=17				
	N	%	N	%			
Age	20<30	19	38	11	22	17.56	.000**
	30<40	12	24	6	12		
	>40	2	4	0	0		
Gender	Male	3	6	1	2	3.24	.43
	Female	30	60	16	32		
Marital status	Single	5	10	3	6	4.13	.35
	Married	27	54	13	26		
	Divorced	1	2	1	2		
Educational level	Nursing diploma	0	0	2	4	13.54	.001**
	Technical nursing diploma	26	52	13	26		
	Bachelor nursing	7	14	2	4		

	degree						
Nursing experience years	<5 years	15	30	13	26	7.69	.05
	5 <10 years	14	28	4	8		
	10 <15 years	2	4	0	0		
	≥ 15 years	2	4	0	0		
Attended training courses about caring with emergency patients	Yes	31	62	11	22	11.74	.001**
	No	2	4	6	12		

*Significant at $p < 0.05$. **Highly significant at $p < 0.01$. Not significant at $p > 0.05$

Table (5) reveals that, age is highly significant ($p = .000$), indicating that younger nurses were more likely to be competent (38%) compared to older age groups. Educational level also showed a highly significant relation ($p = .001$), with those holding a technical nursing diploma having higher competence (52%). Nursing experience was marginally significant ($p = .05$). Attending training courses was highly significant ($p = .001$), with 62% of nurses who attended emergency care training being competent, compared to only 4% who did not. Other factors such as gender, marital status, and nursing experience beyond 5 years did not show a statistically significant relation with nursing practice ($p > 0.05$).

Table (6): Correlation between the studied variables (knowledge and practice regarding holistic assessment of emergency patients):

		knowledge regarding holistic assessment of emergency patients
Emergency nurses' practice regarding holistic assessment	r	.853
	p	.000**

(**) Statistically significant at $p < 0.01$. r correlation

Table (6) shows that, a strong positive correlation ($r = .853$) between nurses' knowledge and practice regarding holistic assessment of emergency patients, with a statistically significant p -value of .000, meaning this result is significant at $p < 0.01$.

Discussion:

Holistic nursing care is an approach to patient care that takes into account the physical, social, spiritual, and psychological needs of the patient. Providing holistic care has been found to be an effective way to prevent diseases and death, as well as improve the quality of healthcare provided to patients. However, despite its perceived benefits, many nurses lack experience with holistic care and only focus on patients' physical needs, treating them as biological machines while ignoring their spiritual, mental, and social needs (*Ambushe, et al., 2023*).

Regarding personal characteristics of the studied nurses, the present study showed that less than two thirds of the nurses were aged between 20 and 30 years, followed by more than one-third between 30 and 40 years, and only minority were between 40 and 50 years. This may be due to the majority of nurses work power providing direct care for the patient in nursing field in our study are young female while higher age category senior nurses perform administrative role and most of those nurses were elderly graduated because more nursing qualification of them was technical nursing diploma.

This finding is in agreement with (*Ambushe, et al., 2023*) whose study "Holistic nursing care practice and associated factors among nurses in public hospitals" in public hospitals of Wolaita zone, South Ethiopia indicated that more than two fifths of the nurses were in the age category between 25 and 30 years. While the present study disagree with (*Laradhi, 2019*) whose study "Assessment of nurses' performance regarding medication administration for patient with myocardial infarction" in Egypt revealed that more than half of their study age group from 30 years and above.



Concerning gender the current study found that the majority of the study subjects were female, with only minority male participants. Most nurses were married, while minority were single and divorced. This finding is consistent with (*Mustafa et al., 2019*) who conduct study entitled “Assessment of Staff Nurse's knowledge and Performance Regarding Triage” in Egypt who reported that highest number of the study subjects were female. Triage is a significant part of emergency patient holistic assessment. This result disagrees with (*Ambushe, et al., 2023*) and concluded that the majority of respondents were male.

Regarding educational qualifications, the majority of the study subjects held a technical nursing diploma, with smaller percentages holding either a nursing diploma or a bachelor's nursing degree. This finding is consistent with (*Shetaia et al., 2023*) conduct a study entitled “Effect of Training Program on Nursing Performance regarding Emergency Management of Acute Myocardial Infarction Patients” in Cardiology care unit at Benha University Hospital in Egypt, who found that more than half of the studied nurses had nursing technical institute degree.

In terms of nursing experience, more than half of the nurses had less than 5 years of experience, and only minority had more than 10 years of experience. This finding may be because of the continuous transfer of nursing staff from the emergency units and their unwillingness to stay in the emergency unit. This result is supported by (*Mansory & Mohammed, 2022*) whose study “Assessment of nurses' knowledge about management of psychiatric patients in emergency unit” in Babylon, Iraq reported that The years of nursing experience in emergency units refers to 1-5 years of nursing experience.

Based on the investigator's experience, the majority of nurses who provide direct care for the patient in nursing field are young while higher age category senior nurses perform administrative role. Studying of nursing in Egyptian universities hasn't been exclusive for females only, but also a lot of young males join these universities to study nursing every year but a lot of males tend to work in surgical operation rooms or intensive care units. Regarding years of experience, fresh graduated nurses are updated with information and skills rather than old graduate nurses. Regarding education, the majority of nurses had technical nursing diploma because all nurses graduating from nursing secondary school have to complete their study at nursing technical institute to get license of nursing practice.

Regarding nurses' knowledge about holistic assessment of emergency patients, the present study revealed that more than three quarter of studied nurses had satisfactory knowledge regarding holistic assessment of emergency patients. This finding agree with the study conducted in Kenya (*Khasoha et al., 2020*) who conducted a study on “Factors influencing provision of holistic nursing care to patients admitted in medical wards at Kenyatta National Hospital” and reported that nurses had satisfactory knowledge of holistic nursing care. This result is against (*Mustafa et al., 2019*) who reported that more than half of the studied nurses had unsatisfactory knowledge regarding triage.

From the investigator point of view, this current study results are due to continuous education of the studied nurses and undergoing to training courses that improve their knowledge regarding emergency care and nearly one quarter of studied nurses required deep understanding of patients' conditions including medical, psychological and social needs.

Regarding nurses' practice about holistic assessment of emergency patients among studied nurses, the present study showed that more than two third of the nurses were rated as having competent practice, while one third were rated as having incompetent practice. This result agree with (*Komsan et al., 2023*) a study entitled “Emergency Nurses' Core Competencies in the Management of Critically Ill Patients in Emergency Departments” and reported that the level of core competencies for emergency nurses was good.

From the investigator's point of view, these findings related to high level of knowledge that affects practice positively, nurses' interest to update themselves, presence of training programs periodically, and follow up from supervisors and only one third of studied nurses couldn't involve problem solving skills, analyzing patient data or making quick decisions because of high pressure situation in emergency department.

A regard relation between personal characteristics of studied nurses and their total knowledge regarding holistic assessment of emergency patients, the present study demonstrated that Age shows a highly statistically significant relation. This result agree with that of (*Reda 2021*) a study entitled “The pattern of risk-factor profile in Egyptian patients with acute coronary syndrome”, who revealed that there was significant relation between nurses' knowledge and their age.

The strongest correlation was found with training courses; nurses who attended emergency care training had significantly higher knowledge levels. This could be due to the nature of ED as a work place and seriousness of the cases, the nurses are keen to acquire more knowledge in order to be able to protect patients from complication which encourage them to attend more training courses. This result agrees with (*Malak et al., 2022*) a study entitled “Knowledge, Skills, and Practices of Triage among Emergency Nurses in Jordan” who reported that There was a statistically significant positive association between triage knowledge, emergency experience, and triage training course.

Based on the investigator point of view, this may be due to availability of continuous in-services educational programs, good orientation of newly graduated nurses and level of education.

Regarding relation between personal characteristics of studied nurses and their nurses' practice about holistic assessment of emergency patients. The results show significant associations with certain variables including age, educational level, nursing experience and attending training courses. This result is against (*Komsan et al., 2023*) who reported that there was no correlation between age, training courses, experience years and level of competent practice. This finding is inconsistent with the finding of (*Majeed et al., 2023*) conduct study entitled “Evaluation of Nurses' Practices and Perceived Barriers Related to Pain Assessment in Critically Ill Patients” at Baghdad Teaching Hospitals who reported that there was an association that was statistically significant with marital status and nurses' practices.

Regarding correlation between the studied variables; nurses' knowledge and practice regarding holistic assessment of emergency patients, the present study showed that there was a strong positive correlation between the two variables. This finding was consistent with (*Shetaia et al., 2023*) who found that there was positive statistical correlation between total knowledge scores and total practice score. This finding contradicted with (*AL-gabri et al., 2019*) a study entitled “Assessment of Nurses' Performance Regarding Care Of Chest Trauma Patients ” at Trauma Emergency Unit, Assiut, Egypt; who revealed that there was no statistical significant difference between nurses' Knowledge and practice.

From the investigator's point of view, these findings were related to the interest of the studied nurses to find the balance between knowledge and practice in their profession and hospital desire to be accredited.

Conclusion:

Based on the finding of the present study, it can be concluded that:

There was nearly three quarters of studied nurses had satisfactory knowledge regarding holistic assessment of emergency patients while more than two thirds of studied nurses had competent practice regarding holistic assessment of emergency patients. Moreover, there was a highly statistically positive correlation between total knowledge and practice regarding holistic assessment of emergency patients among the studied nurses.

Recommendations:

Based on the result findings of the study, the following recommendations were suggested:

1. Continued nursing education and in-service training programs about holistic assessment of emergency patients. Holistic assessment should be regularly organized by hospital administration for staff nurses in order to equip them with adequate knowledge and practice related to care of patients.
2. Evidence based guidelines regarding holistic assessment of emergency patients should be revised periodically and available in all hospitals in both Arabic and English languages and incorporated in the different nursing curricula to strengthen graduates' level of understanding and practice.

3. Develop comprehensive and simplified educational materials for nurses including basic knowledge and practices regarding holistic assessment of emergency patients.
4. Continuous evaluation of nurses' knowledge and practices regarding holistic assessment of emergency patients.

Recommendations for further research:

1. Replication of the study on a large sample acquired from different hospitals in different geographical area in Egypt to confirm the results of the study.
2. Further research should be carried out on nurses' performance regarding holistic assessment of emergency patients.

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