# Knowledge, Attitude and Practice of Nursing Staff toward Working at Emergency Unit

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## ABSTRACT

*Highlights :* Emergency department need essentisl careful assessment as it deal with acute, urgent health situations so should have high skilled well trained staff.

*Aims :* Study involves assessing the emergency nurse's knowledge, attitude, and practice regarding the practical obstacles that impede nurses from working in the Emergency Departement and taking necessary measures to resolve them.

*Material and Method :* The current study was a cross-sectional study conducted upon (400) nurses. Questionnaire form to assess nurses' knowledge, attitude, and practice in Mosul's teaching hospitals / Iraq related to working in the Emergency Departement. The acceptability score was established at 61.2 mark / 85%; less than this limit was considered unsatisfied as degree 85% (61.2 marks) was considered as acceptable. The data were surveyed applying the (SPSS version 25) descriptive and inferential statistics.

*Result :* The study showed that there were statistically significant differences in the level of knowledge. The mean ± S.D of the knowledge was (33.15 ± 11) . The mean of practice was (23±9). The majority of nurses was in the accepted level 196 (49%) and statistically highly significant P-value was 0.01. Attitude answering questions show high agreement on questions (Number of the good training staff is essential in the emergency department? , and Handwashing is necessary before preparation and administration? ) with answers percentage are [ 96.25% and 93.75% respectively]. The difference between nurses was highly significant p-value was 0.001.

*Conclusion :* This study concluded that the awareness or knowledge of nurses is satisfactory with the level of attitude and practice with respect to Emergency Department

*Keywords :* Emergency, Cautuality Unit, Triag, Acute Management, Knowlegde, Attitude, Practice.

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## معارف ومواقف وممارسات الكادر التمريضي في وحدة الطوارئ

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### الخلاصة

**الأهداف :** تتضمن الدراسة تقييم معرفة ممرضة الطوارئ وسلوكها وممارستها فيما يتعلق بالعقبات العملية التى تعيق الممرضات عن العمل فى قسم الطوارئ واتخاذ التدابير اللازمة لحلها.

**المادة والطريقة :** الدراسة الحالية عبارة عن تصميم دراسة مقطعية تحليلية غير تجريبية وتتكون من (٤٠٠) ممرضة. استمارة استبيان لتقييم معرفة الممرضات وسلوكها وممارستها فى مستشفيات الموصل التعليمية / العراق فيما يتعلق بالعمل فى قسم الطوارئ. تم تحديد درجة القبول عند ٦١.٢ علامة / ٨٥٪ ؛ أقل من هذا الحد اعتبر غير راض حيث اعتبرت الدرجة ≤ ٨٥٪ (≥ ٦١.٢ علامة) مقبولة. تم مسح البيانات باستخدام SPSS (الإصدار ٢٥) الإحصاء الوصفى والأستنتاجى.

**النتيجة :** أظهرت الدراسة وجود فروق ذات دلالة إحصائية فى مستوى المعرفة. كان متوسط SD ± للمعرفة (٣٣.١٥ ± ١١). كان متوسط الممارسة (٢٣ ± ٩). كانت غالبية الممرضات فى المستوى المقبول ١٩٦ (٤٩٪) وكانت ذات دلالة إحصائية عالية عند قيمة T (52.3) ، وكانت قيمة P 0.01. تُظهر أسئلة الإجابة عن المواقف توافقًا كبيرًا على الأسئلة (عدد طاقم التدريب الجيد

ضرورى فى قسم الطوارئ؟ وغسل اليدين ضرورى قبل الإعداد والإدارة؟ هل كانت نسبة الإجابات [٩٦.٢٥٪ و ٩٣.٧٥٪ على التوالى]). كان الفرق بين الممرضات قيمة T ذات دلالة إحصائية (٧٤.٦) ، وكانت القيمة الاحتمالية ٠.٠٠١. الخلاصة: خلصت هذه الدراسة إلى أن وعى الممرضات أو معرفتهم مقبولة بمستوى السلوك ، كما أن الممارسة فيما يتعلق بـ قسم الطوارى كانت مرضية.

**الكلمات المفتاحية :** وحدة الطوارئ ، المعرفة ، المواقف ، الممارسات ، الحالات الطارئة الحادة .

## INTRODUCTION

An emergency department (ED) is a well-known word that denotes medical health, which defines a specific place or section responsible for dealing with acute, urgent health situations[1]. Numerous medical jargon can reflect (ED) for example, emergency & accident department (E & A), and or "emergency room (ER)", sometimes "ward (EW)". ED can be defined as " a medical therapeutic facility service in emergency medicine, the acute care of patients who present without a prior appointment; either by their or an ambulance"[2].

Emergency department is found in a primary care center or hospital and other health care facilities. This department is also responsible for providing surgical and medical care to patients entering the hospital needing immediate care. ED employees may also reply to specific situations within the hospital, for example, cardiac arrests[3].

In the ED, accurate diagnosis is essential to confirm the best patient sequel in a minimum of time. Every minute needs to recognize patients at the extreme hazard of a life-threatening situation and urgent initiation of proper management. At the same time, cost control and optimized patient flow treatment are also critical. Emergency provides free, high-quality, long-term sustainable healthcare around the world. In his published article, Morley C stated that "every minute, a patient is treated by emergency, but there are still so many more people that need our help"[4].

A complex system, an enormous number of people and a wide range of services around and beyond the hospital are linked to the ED, taking care with life-saving in complicated or urgent situations of persons or communities [5].

Casualty departments follow specific crucial laws inpatient dealing, including a high degree of care, humanity, skill, time-consuming, urgent good decisions, and the state of emergency and the psychological distress that may affect the patient's family. Based on that, EDs are carefully staffed with skilled health care workers, whether physicians or nurses. In epidemics where patient prevalence increases, doctors might ask people to wait a few minutes to provide medical care[2,6].

The role of nursing staff with evaluation are emphasised widely in international literature. However, this is deficient in the emergency branch. Emergency nurses' knowledge, attitude, skills and practice are serious factors for evaluating nursing care quality in the ED [7,8]. The World Health Organization advises countries "to have comprehensive plans at all levels to prepare for mass casualty that may occur," as occurs in the COVID-19 epidemic attack. In emergency epidemic crises, all nurses can work both in pre-hospital and hospital settings as emergency departments. In everyday situations, nurses have a crucial role in an emergency unit because they contribute to saving lives and promoting health under challenging conditions; therefore need the right and good competencies[9].

Limited articles focus on the potential contribution of the nurse practitioner role. Many nursing staff refuse to work in the emergency department because of massive duties, requirements, and responsibilities[10].

The authors in this article emphasize the emergency department nursing staff with a specific research question regarding the relationship between knowledge, practice, and its influence on the quality of emergency nursing care. Yet effective practical skill does not reflect good knowledge similarly change behavior in terms of clinical decisions and practice is not necessarily associated acquiring fundamental knowledge alone as knowledge is factual[11,12].

Aim of study is to assessthe emergency nurse's knowledge, attitude, and practice regarding the practical obstacles that impede nurses from working in the ED and taking necessary measures to resolve them.

## MATERIAL AND METHOD

### Ethical Approval

The study was ethically approved by the ethical research committee in the Nineveh Health Directorate / Ministry of Health and Enviroment ( Meeting No. 217 / Liscence No. 21/73 dated in 20 / 6 / 2021).

### Study Design

This study is invented on a questionnaire form to assess nurses' knowledge, attitude, and practice in Mosul's teaching hospitals / Iraq related to working in the ED. The current study was a cross-sectional study design and consisted of 400 nurses. Tt's the first study performed in Nineveh Governorate. The study participants were nurses employees in the emergency department from four teaching hospitals ( Al-Salam Teaching Hospital, Ibu-Sena Teaching Hospital, Al-Jumhoury Teaching Hospital, and General Mosul Teaching Hospital).

The researchers distribute the questions's forms in Mosul hospitals to clarify the study's purpose and clinical importance to the hospital manager. The consent form and official approval to perform the survey was attained from each hospital' manager. A non-probability suitable (convenient) modified sampling technique was performed to enroll participants. The data was collected from 1st July 2021, to 1st August 2021.

Nurses who are not involved in clinical work, and those who are not present on the day during data collection are excluded from the study.

The authors create two channels for data collection after reviewing the related literatures. List of self-answered questioners comprising of 3 parts. As principles, demographic features of the participants (ten items) are the first, includes name, date of birth, gender, educational level, work experience in ED. One of the most crucial questions is teaching programs attendance which concerns the emergency department. The second part of the questionnaire included 54 queries to evaluate the nurses' knowledge, practice, and attitude employed in ED. The last section of the questionnaire asked the nurses about the supposed obstacles to work in ED (ten items). The questions collected from different articles "WHO, the standard of the American Pain Society, the National Comprehensive Cancer Network Pain Guidelines " [13] were then modified and translated to Arabic, which is the official language in Iraq. In the present study, the questioning consisted of fifty-two questions, 25 true-false, 25 multiple-choice questions and two case discussions, of which each had two under it. The review and edit established the validity of the question by a panel of experts. To assess the mean score of the

knowledge, attitude and practice correctly. The investigator uses it to assess emergency nurses' practices which include twenty items covered the following points: Patient admittance (4 objects), a triage manipulation during patient's care (10 objects) and standard precautions use (11 objects). Total practice degrees were 72 marks. Nurses' practice grading was spread as follows; correct, accurate answer is given two marks. One mark for incorrect answers and not done steps grades zero.

The acceptability score was established at 61.2 mark / 85%; less than this limit was considered unsatisfied as degree > 85% ( > 61.2 marks) was considered as acceptable [14].

The correct answer was given one degree and zero degrees for incorrect answers. The test-retest reliability of the present study for 40 nurses in two weeks intervals was 93%, while the Spearman-Brown Prophecy as a measure of internal consistency was found to be 82%. Both were high acceptable parameters. The data were surveyed applying the (SPSS version 25).

## RESULT

Four hundred nurses are chosen according to the principles of sampling size. Demographical data of the nurses was demonstrated in table (1). The mean age of the participant nurse was (33.3±6). Around two-thirds of the study nurses were male 256 (64%). On the contrary 144 (36%) were female. The nurses' educational level was distributed from secondary school (18%) to master's degree (2%). However, the most frequent qualification was a Bachelor of Nursing 160 (40 %). Regarding marital status, 63% of nurses were married (252).

The years of nursing work experience was distributed from less than five years 90 (22.5%) to more than ten years, while the most frequent group was 5-10 years 260 (65%). The training courses related to working in the emergency department, most nurses were not enrolled in the training course 320 ( 80%) related to the emergency. In comparison, only 80 nurses (20%) were enrolled at least one training course.

This multicenter questionnaire-based research assesses knowledge levels among nurses in the emergency department of the four government hospitals. The study revealed that 80% of the ED nurses were without formal training in emergency/trauma/critical/intensive care nursing (Table 1).

Table 1: Demographic Data of the Nurses Sample in the Study

| Variables | | No. | % |
|---|---|---|---|
| Age | 20-29 | 155 | 38.75% |
| | 30-39 | 140 | 35% |
| | 40-49 | 72 | 18% |
| | >50 | 33 | 8.25% |
| Gender | Male | 256 | 64% |
| | Female | 144 | 36% |
| | Total | 400 | 100% |
| Qualification | Secondary Nursing School | 72 | 18% |
| | Diploma of nursing | 160 | 40% |
| | Bachelor of nursing | 160 | 40% |
| | Master's degree | 8 | 2% |
| Marital status | Single | 140 | 35% |
| | Married | 252 | 63% |
| | Widowed | 4 | 1% |
| | Divorces | 4 | 1% |
| Years of Experience | >5 years | 90 | 22.5% |
| | 5-10 years | 260 | 65% |
| | >10 years | 50 | 12.5% |
| Working Place | Al-Salam hospital | 132 | 33% |
| | Ibn- Sania hospital | 118 | 29.5% |
| | Al-Jumhoury hospital | 99 | 24.75% |
| | Mosul General hospital | 51 | 12.75% |
| Training Courses | Present | 80 | 20% |
| | Absent | 320 | 80% |
| | Total | 400 | 100% |

Table 2 expresses the knowledge score of the nurses working in the emergency unit. The current study results showed that most nurses had unaccepted the level of knowledge related to personal protective equipment (PPE) and contagion control actions. The study showed that there were statistically significant differences in the level of knowledge. The knowledge score of nurses regarding working in the emergency department was from 10-100 degrees. The mean ± S.D of the knowledge was 33.15 ± 11 ; However, the majority of the nurse was between 30-49 degrees 186 (46.5%), this difference between nurses was significant T-value 56.3 and P-value (0.001) in knowledge score between each others.

Table 2: Knowledge Score Regarding Working in the Emergency Department[14]

| Knowledge score (10-100) | N | % |
|---|---|---|
| Unaccepted 10-29 | 120 | 30% |
| Acceptable 30-49 | 186 | 46.5% |
| Very good 50-69 | 80 | 20% |
| Excellent >70 | 14 | 3.5% |
| Total | 400 | 100% |
| Mean ± S.D. | 33.15±11 | |
| (One Sample T Test) T-value | 56.3 | |
| P-value | 0.001 | |

Practice scores regarding working in the emergency department are shown in Table (3). The mean of practice was (23±9). The majority of nurses was in the accepted level 196 (49%). In comparison, the lower percentage was at an excellent level 26 (6.5%). This difference in practice score was statistically highly significant P-value was 0.01.

Table 3: Practice Score Regarding Working in Emergency Department

| Practice score (5-50) | N | % |
|---|---|---|
| Not accept 5-14 | 110 | 27.5% |
| accept 15-24 | 196 | 49% |
| Good 25-34 | 68 | 17% |
| Very good >35 | 26 | 6.5% |
| Total | 400 | 100% |
| Mean ± S.D. | 23±9 | |
| (One Sample T Test) T-value | 52.3 | |
| P-value | 0.01 | |

Attitude toward working in the emergency department showed in Table (4). The difference between nurses was highly significant p-value was 0.001.

Attitude answering questions as shown in Table (4) high agreement on these questions (Number of the good training staff is essential in the emergency department? , Handwashing is necessary before preparation and administration? And the number of patients in the emergency department is vastly more than capacity?), were answers percentages are [ 96.25%, 93.75% and 90% respectively].

Table 4: Attitude toward Working in the Emergency Department

| Attitude | Agree | Disagree | Unsure |
|---|---|---|---|
| Do you prefer to work in the emergency department more than another department | 50 (12.5) | 320(80%) | 30(7.5%) |
| I don't think it necessary to know about tools preparations for an emergency unite | 30(7.5%) | 300(75%) | 70(17.5%) |
| The emergency department should prepare everything to handle the mass casualty | 310(77.5%) | 50(12.5) | 40(10%) |
| The training course is required for all nurses working in the emergency unit | 100(25%) | 200(50%) | 100(25%) |
| Do you think a plan for work in the emergency department is essential | 75(18.75%) | 185(46.25) | 260(65%) |
| General and specific education on IV drug harmless management would decrease mistake | 100(25%) | 150(37.5%) | 150(37.5) |
| Handwashing is necessary | 375(93.75%) | 15(3.75%) | 10(2.5%) |
| A check of vital signs before and after vasoactive drug's administration (dopamine, dobutamine, and nitroglycerin) reduces compliances | 275(68.75%) | 50(12.5) | 75(18.75%) |
| To respect infusion speed of administered solutions through IV (come chemotropic, antibiotic, amine, aparine, etc.) reduces errors | 310(77.5) | 45(11.25%) | 45(11.25%) |
| The six right roles following (right prescription, right drug, right patient, proper dosage, correct administration Route, etc.) reduces errors | 240(60%) | 10(2.5%) | 50(12.5%) |
| Previously management is essential to make two checks to confirm the proper correspondence among prescription, preparation, and administration of the IV medication | 300(75%) | 50(12.5%) | 50(12.5%) |
| Triaging systems improve the work in emergency unite | 250(62.5%) | 100(25%) | 50(12.5%) |
| Number of well training staff is essential in emergency department | 385(96.25%) | 5(1.25%) | 10(2.5%) |
| The number of patients in the emergency department is very large more than capacity | 360(90%) | 15(3.75%) | 25(6.25%) |
| The working time for staff is very long | 320(80%) | 40(10%) | 40(10%) |
| (One Sample T Test) T-value | 74.6 | | |
| P-value | 0.001 | | |

## DISCUSSION

The study's descriptive analysis showed that it aligned with a study done by Avaya and others. The study highlights that (80%) of the ED nurses working in the EDs were without formal training in emergency/trauma/critical/intensive care nursing. This high percentage may adversely influence, as training on patients is taught in detail in these courses [15]. Knowledge has been recognized as a significant source that impacts the accuracy of care in the ED.

The formal study results showed that emergency nurses had not accepted the level of practice knowledge about "personal protective equipment (PPE)" and contagion control actions; this effect may be due to emergency nurses could self-assurance that their assignment is better by detecting to worldwide protections, and this resulted in the unfamiliarity of some events of infection control so that emergency nurses essential the adding of evidently titled theory and practice education courses about PPE in ER. The result is in the same line with Arafat and others. Statistically significant differences were approved in this study includes knowledge level, infection control practice methods, nosocomial infection control attitude [16].

Employed experience is also considered as a factor of direct connection with the overall attitude. From the study, the working experience of the respondents in specialty areas did not affect their attitude scores. The few studies conducted "in the United States revealed that per anesthesia nurses earned a mean score of 72% [17]. In contrast, nurses with oncology certification achieved a mean score of 77.5% compared with 72.5% for those without certification [18]. The average score from a study of Turkish nurses was 35% [19], and it was 55% for a study conducted in Italy [20], whereas studies from Ireland and Great Britain demonstrated scores in the mid-70s. [19, 20]". These studies did not describe scores in terms of education levels or years of experience. This finding was agreed with another study done by Kahsay and Pitkäjärvi when found the knowledge level and attitude of the emergency nurses was poor. The participants' correct mean score was 49.5%. Significantly higher knowledge and attitude levels were confirmed in Bachelor's Degree nurses compared to Diploma and Certificate nurses level of professional preparation (95% CI = 7.1–16.7 and 9.4–19.1; p < 0.001), respectively. [21]. Another study done by Kelkay and others disagreed with this funding. It found that "388 nurses participated in the study with a response rate of 97.7 among the study participants; 38.6% and 28.4% had good knowledge and good practice BLS" in the emergency department, respectively. Factors as education level, assignment and training place were significantly associated with knowledge of BLS among emergency staff [22]. Also, this study done in Egypt by Khalil and others exposed that more than 2/3 (72.7) percentage of nurses have an acceptable level of knowledge about management emergency cases with the mean knowledge degree of (10.32 ± 2.75) out of 15 degrees. Regarding nurses' practices, the nurses show the acceptable practices about the process of the patient admission. In a different way, they showed unacceptable triage care practices, PPE, and infection control measures [23].

## CONCLUSION

This study concluded that the knowledge of nurses is accepted with level of attitude, also practice with respect to EDs was satisfactory.

## RECOMMENDATIONS

Authors recommend increasing the education programmes for the nursing staff and a motivation guide to increase acceptance to work in the emergency unit smoothly.

## REFERENCES

1. Provide basic strategies to improve knowledge among the nursing staff by providing excellent and appropriate education, creating positive attitudes, and addressing barriers.
2. Do further studies to investigate different degrees of nurses.
3. The Ministry of Health should provide advanced training to providing expert staf and improve safety of patients.

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