ISSN 2786-0183
Helwan International Journal for Nursing Research and Practice
Vol. 4, Issue. 10, Month: June 2025, Available at: https://hijnrp.journals.ekb.eg/

Nurses' Performance Regarding Toxicological Emergencies in The Emergency Department According to Evidenced Nursing Guidelines

Ahmed Mahmoud Abo elazm Gaafar[1], Manar Fathy Hamza[2], Ahmed Ali Hafez[3]

1. B.Sc. Faculty of Nursing- Modern University for Technology and Information,
2. Assistant Professor of Medical Surgical Nursing, Faculty of Nursing- Helwan University,
3. Lecturer of Medical Surgical Nursing, Faculty of Nursing- Helwan University.

Abstract

Background: Toxicological emergencies are life-threatening situations requiring rapid, evidence-based interventions to improve patient outcomes. Nurses play a pivotal role in managing such emergencies. **Aim:** to assess nurses' performance regarding toxicological emergencies in the emergency department according to evidenced nursing guidelines. **Research Design:** A descriptive exploratory research design was used. **Setting:** The study was conducted in 1-Clinical toxicology center, Cairo University Hospitals and 2-Clinical toxicology center, Tanta University Hospitals, Egypt. **Subjects**: A convenient sample of all available nurses (40 nurses) at previously mentioned setting. **Tools:** Three tools were used for data collection; Tool (1) Self-administered questionnaire, Tool (2) Observational checklist on the management of poisoned patients, and Tool (3) Nurses' attitude toward caring of poisoning patients**. Results**: more than two thirds of the studied nurses had fair knowledge about toxicological emergencies. As well, more than three quarters of nurses had acceptable levels of practice and more than half of the studied nurses had a negative attitude toward caring of poisoning patients. **Conclusion:** the current study findings concluded that there was a significant correlation between studied nurses' total score of knowledge and total score of both practice and attitude. **Recommendation:** Emphasizing the importance of continuous education and training programs and improving emotional resilience and foster positive attitudes among nurses.

Keywords: *Evidenced-nursing guidelines, Nurses' performance, Toxicological emergencies.*

Introduction:

Toxicological emergencies are medical emergencies, and patients are always rushed to the hospital at the earliest possible moment, irrespective of the amount and nature of poison ingested. All the cases of poisoning are admitted through emergency services where the life of the patient is the main issue for the medical personnel. The assessment and management of acute poisoning constitutes a core emergency nursing competency. It is a common presentation that requires early management decisions to ensure an optimal outcome while at the same time avoiding unnecessary investigation and intervention (**Chatterjee, 2020**).

Poisoning affects the patient's condition quickly, and the patient's life can be endangered if there is a delay in initiating urgent treatment. Decisions on appropriate responses to such casualties have to be appropriate, swift and evidence based. It is essential that all emergency nurses are familiar with the clinical priorities in life - threatening situations in order to ensure that problems are identified and treated accordingly. Therefore, emergency nurses should be equipped with professional knowledge and skills that enables them to manage poisoned patient accordingly **(Anderson, 2021).**

ISSN 2786-0183
Helwan International Journal for Nursing Research and Practice
Vol. 4, Issue. 10, Month: June 2025, Available at: https://hijnrp.journals.ekb.eg/

According to **Saad et al., (2021),** The general approach to the poisoned patient can be divided into six phases: (1) stabilization; (2) laboratory assessment; (3) decontamination of the gastrointestinal tract, skin, or eyes; (4) administration of an antidote; (5) elimination enhancement of the toxin; and (6) observation and disposition. Management begins with a thorough evaluation, recognition that poisoning has occurred, identification of the agent involved, assessment of severity and prediction of toxicity. Supportive care is directed at preventing or limiting the complications of a toxic exposure and is the cornerstone of good management.

Nurses play a critical role in managing toxicological emergencies, providing essential care and expertise throughout the entire patient care continuum. In the context of toxicological emergencies, nurses serve as frontline responders, often being the first healthcare professionals to interact with the affected individuals. They conduct rapid assessments of the patient's condition, obtain a thorough history of exposure, and assess vital signs to determine the severity of toxicity. This initial triage helps in prioritizing care and facilitating timely intervention (***Getie, 2020***).

Assessment is the cornerstone of safe and effective practice and goes hand in hand with the process of prioritizing patients' needs. It has been compared to the process of house building whereby assessment is the foundation on which all care planning and nursing action is built. The process of assessment starts as soon as the patient arrives in the accident and emergency department and incorporates the gathering of information regarding the patient's current physiological status along with a history of the present and any previous episodes **(Hussein et al, 2020).**

A study by **Azharuddin et al. (2023)** assessed the knowledge and practices of critical care nurses regarding toxicological emergencies and found that a significant proportion of nurses had poor knowledge of poisoning management. However, many demonstrated acceptable practices, suggesting that practical experience may compensate for knowledge gaps to some extent. The study underscores the need for specialized training programs that can enhance nurses' theoretical understanding and practical skills in managing toxicological emergencies.

Nurses' attitudes towards managing poisoning cases play a crucial role in determining the quality of care provided to patients. A positive attitude, characterized by confidence and a proactive approach, can significantly enhance the effectiveness of nursing interventions in toxicological emergencies. Conversely, negative attitudes, such as fear or reluctance to engage in complex cases, can impede patient care. Research indicates that while many nurses possess a generally positive outlook towards handling poisoning cases, there are substantial variations influenced by factors such as experience, training, and institutional support **(Mohamed, 2020).**

Significance of the study

Toxicological emergencies are thought to cause more than one million illnesses per year around the world. After road traffic accidents, burns, and drowning, poisoning is the fourth leading cause of accidental injury. According to World Health Organization statistics, in 2022 documented a mortality rate of 1.4 persons per 100000 populations globally and 2.7 persons per 100000 populations in Africa from unintentional poisoning (***WHO, 2022***).

Unintentional and intentional exposures continue to be a significant cause of morbidity and mortality in Egypt. Poisoning exposure is an increasingly public concern due to the progressive flooding of chemicals, pharmaceuticals and natural toxins in the international markets. The Poison Control Centre Ain Shams University Hospitals received 19744 cases in the year 2013 (***Halawa, 2013***).

Aim of the study:

This study aimed to assess nurses' performance regarding toxicological emergencies in the emergency department according to evidenced nursing guidelines through the following objectives:

1- To assess nurses' knowledge regarding toxicological emergencies in the emergency department according to evidenced nursing guidelines

2- To assess nurses' practices regarding toxicological emergencies in the

ISSN 2786-0183
Helwan International Journal for Nursing Research and Practice
Vol. 4, Issue. 10, Month: June 2025, Available at: https://hijnrp.journals.ekb.eg/

emergency department according to evidenced nursing guidelines

3- To assess nurses' attitude regarding toxicological emergencies in the emergency department according to evidenced nursing guidelines

Research Questions

The present study intended to answer the following question:

1- What is nurses' knowledge regarding toxicological emergencies in the emergency department according to evidenced nursing guidelines?

2- What is nurses' practice regarding toxicological emergencies in the emergency department according to evidenced nursing guidelines?

3- What is nurses' attitude toward toxicological emergencies in the emergency department according to evidenced nursing guidelines?

Subjects and Methods:

A. Research design:

A descriptive exploratory research design was used to achieve the aim of this study.

B. Setting:

The study was conducted in Clinical toxicology center, Cairo University Hospitals and Clinical toxicology center, Tanta University Hospitals.

***C.* Sample:**

A convenient sample of 40 nurses were chosen in the studied and divided into 20 nurses from Clinical toxicology center, Cairo University Hospitals and 20 nurses from Clinical toxicology center, Tanta University Hospitals for three months.

***D.* Tools of data collection:**

Three Tools were used in this study for collecting data as the following:

Tool 1 - Self-administered questionnaire:

This tool was This was in simple Arabic language and included two parts:

Part 1: Demographic data:

It was developed by the investigator and includes (gender, age, qualification, job position, experience in poisoning management and training in poisoning management).

Part 2: Nurses' knowledge assessment regarding toxicological emergencies:

This part was adapted from (***Saad, 2021***) to assess the nurses' knowledge about toxicological emergencies. It's consisted of (23) true or false questions and (20) multiple choice questions covering the areas of (definition, signs and symptoms of different types of poisoning, initial management for patient admitted with poisoning).

The scoring system for nurses' knowledge assessment regarding toxicological emergencies was as following:

The correct response was given one point and incorrect response was given a score of zero. The total score was 43. The total marks were calculated and converted into percentage and the level of knowledge was classified according to **Saad et al., (2021)** as: Good > 85%, Fair 60% - 85% and Poor <60% .

Tool 2: Observation checklist on the management of poisoned patient :

This tool was adopted from **Tassew et al., (2022),** to assess nurses' practices regarding emergency management of patients with poisoning and consists of seven domains: Airway (6) items, breathing (4) items, circulation (6) items, neurological status (1) item, medications (3) items, medical history (8) and gut contamination (4) items with total points (32).

The scoring system of nurses' practice assessment regarding toxicological emergencies:

The nursing interventions were measured using done or not done. The data was scored by (1= done and 0= not done). The cut-off point of competent nurse is >90% of total score. The critical care nurse has an acceptable practice to care for patient with toxicological emergencies if total score falls between 70% and 90%. Incompetent nurse is <70% of total score which means that the critical care nurse is incompetent in practices to care for patient with toxicological emergencies **(Saad, 2021).**

ISSN 2786-0183
Helwan International Journal for Nursing Research and Practice
Vol. 4, Issue. 10, Month: June 2025, Available at: https://hijnrp.journals.ekb.eg/

Tool 3 - Nurses' attitude toward caring of poisoning patients:

A three-point Likert scale was adopted from (**Tassew, 2022**) to assess nurses' attitude toward caring of poisoning patients. It's consisted of (12) statements categorized as (agree, neutral, disagree) and the tool was in Arabic.

Scoring system of the Nurses' attitude:

According to **Tassew et al., (2022)**, Agree responses were given two points, neutral responses were given one point and disagree responses were given zero point for statements numbered (3,4,8,12). On the other hand, disagree responses were given two points, neutral responses were given one point and agree responses were given zero point for statements numbered (1,2,5,6,7,9,10,11). Responses were categorized as follows:

(> 75% = positive attitude, 75-70% = neutral attitude and < 70% = negative attitude).

Operational Design:

The operational design for this study included preparatory phase, pilot study, content validity and reliability, and field work.

The preparatory phase:

It included reviewing of past, current, national and international related literature and theoretical knowledge of various aspects of the study using books, articles, internet, periodicals and magazines to develop tools for data collection. During this phase, the investigator also visited the selected places to get acquainted with the personnel and the study setting. Development of the tools was under supervision and expert opinions were considered for guidance.

Pilot study:

A pilot study was conducted to test feasibility and applicability of the study tools used in this study. It was carried out on 10% of the total study subjects (4 nurses) to examine the clarity of questions and time needed to complete the study tools. Based on the results, no modifications were done for the used tools so subjects included in the pilot study were included in the study group.

Content validity:

Testing validity of the proposed tools by using face and content validity. Face validity aimed at inspecting items to determine whether the tools measure what they are supposed to measure. Content validity was conducted to determine whether the content of the tool covers the aim of the study. It was measured by a jury of 5 experts, two of them were professors and two were assistant professors in medical surgical and critical care nursing at faculty of nursing, Helwan university. The expertise reviewed the tools for clarity of sentences, relevance, accuracy, comprehensiveness, simplicity and applicability, minor modifications were made. Finally, the final forms were developed.

Content reliability:

The reliability of the tools was assessed through measuring their internal consistency by Cronbach Alpha Coefficient test. The acceptable value of Cronbach Alpha Coefficient test for tools was not less than (0.70) **(barbera et al., 2021).** The reliability of Self-administered questionnaire tool was (0.822), also the reliability of observation checklist on the management of poisoned patient tool was (0.904) and finally, the reliability of nurses' attitude toward caring of poisoning patients tool was (0.796).

Fieldwork:

To carry out the study, the investigator assessed the demographic characteristics of study subjects, nurses' knowledge about toxicological emergencies, nurses' practices regarding emergency management of patients with poisoning and nurses' attitude toward caring of poisoning patients.

Official permissions from the research committee and from all nursing staff in the selected unit to proceed in the current study.

Data were collected over a period of 3 months from July 2024 to September 2024. The investigator visited the selected settings two days per week including the morning, afternoon and night shifts. Involved nurses were informed individually about the purpose and nature of the study.

Self-Administered questionnaire and nurses' attitude tools were distributed to nurses to fill then the investigator checked each questionnaire after completing the data, to be sure that no missing information was present. It took around 30 minutes to be filled. Concerning the observation of nurses'

ISSN 2786-0183
Helwan International Journal for Nursing Research and Practice
Vol. 4, Issue. 10, Month: June 2025, Available at: https://hijnrp.journals.ekb.eg/

practice, it was carried out in the day shifts during their practice of different nursing care skills utilizing the observational checklist tool. It took around 30 to 45 minutes to be filled. Observation was done without letting nurses know that they are being observed.

Administrative Design:

To carry out the study, official letters were issued from Dean of Faculty of Nursing, Helwan University explains the aim of the study for director of Clinical toxicology center, Cairo University Hospitals and director of Clinical toxicology center, Tanta University Hospitals.

Ethical considerations:

Prior study conduction, The research approval of protocol was obtained From Scientific Research Ethical Committee in faculty of nursing in Helwan university before starting the study.

Participation in the study was voluntary, and subjects were given complete full information about the study and their role before the beginning of the study. The investigator clarified the objective of the study and aim of the study to the nurses included in the study.

The investigator assured maintaining anonymity and confidentiality of the subjects data and it will not be accessed by any other party without taking permission of the participants.Nurses were informed that they are allowed to choose to participate or not in the study and that they had the right to withdraw from the study at any tine without giving any reasons. Ethics, values, culture and beliefs were respected.

Statistical Design:

The data were collected and coded. Then the collected data were organized, analyzed using appropriate statistical significance test using the Computer Statistical Package for Social Science (SPSS), version 25 for analysis. Data was presented using descriptive statistics in the form of frequencies, percentages and mean ± standard deviation (± SD). Pearson test and chi square tests were utilized to compare the frequencies and the correlation between study variables. Degrees of significance of results were considered as follows:

P value > 0.05 insignificant

P value < 0.05 significant

P value < 0.01 moderate significance

P value < 0.001 highly significance

Cronbach's alpha coefficient was used to determine the reliability of the tool. Test of significance was used to find out associations between study variables. Chi-square (x2) test of significance was used in order to compare proportions between two qualitative parameters. Correlation between variables was evaluated using Pearson correlation test (r).

Results:

Table (1): Frequency and percentage distribution of the studied nurses according to their demographic data (n=40).

Items	No	Percentage
Gender		
Male	9	22.5%
Female	31	**77.5%**
Age		
20 - <30 yrs.	25	**62.5%**
30 - <40 yrs.	9	22.5%
40 - <50 yrs.	5	12.5%
50 – 60 yrs.	1	2.5%
Mean SD	**30.53 ± 7.64**	
Qualification		
Diploma Nurse	15	**37.5%**
Technical Nurse	18	**45%**
Bachelor	5	12.5%

ISSN 2786-0183
Helwan International Journal for Nursing Research and Practice
Vol. 4, Issue. 10, Month: June 2025, Available at: https://hijnrp.journals.ekb.eg/

Postgraduate studies	2	5%
Job position		
Staff nurse	34	**85%**
Charge nurse	4	10%
Head nurse	2	5%
Experience in poisoning management		
< 5 yrs	30	**75%**
5 – <10 yrs	7	17.5%
≥10 yrs	3	7.5%
Mean SD	**4.51 ± 3.18**	
Training in poisoning management		
Yes	9	22.5%
No	31	**77.5%**

Table (1) showed that, 77.5% of the studied nurses were females. As regard to age, 62.5% of the studied nurses their age ranged between 20 - <30 years, with Mean SD of age was 30.53 ± 7.64 years. Regarding qualifications, technical nurses were 45% and Diploma nurses were 37.5%. Moreover, 85% of them were staff nurses. Regarding years of experience, 75% of them had < 5 years, the mean SD of years of experience was 4.51 ± 3.18 years. Finally, regarding previous training in poisoning management, it's shown that 77.5% of them didn't have training in poisoning management.

Figure (1): Percentage distribution of the studied nurses according to their total knowledge regarding poisoning (n=40).

Fig (1): showed that, 20% of the studied nurses had good knowledge regarding toxicological emergencies. While 68% of them have fair knowledge and 12% of them had poor knowledge.

ISSN 2786-0183
Helwan International Journal for Nursing Research and Practice
Vol. 4, Issue. 10, Month: June 2025, Available at: https://hijnrp.journals.ekb.eg/

Figure (2): Percentage distribution of the studied nurses according to their practices regarding management of poisoned patient (n=40).

Fig (2) showed that, 15% of the studied nurses were competent regarding management of poisoned patient and 77.5% had acceptable practice. While, 7.5% of them were incompetent.

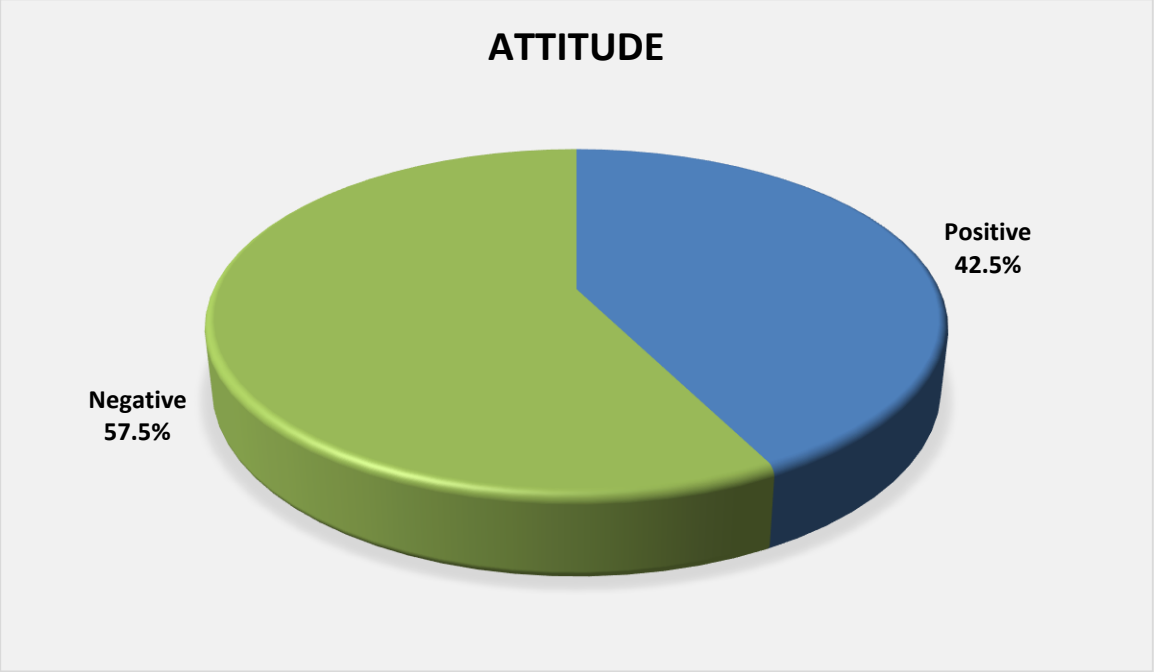

Figure (3): Percentage distribution of the studied nurses according to their total attitude regarding caring of poisoning patients (n=40)

Fig (3) showed that, 57.5% of the studied nurses had negative attitude regarding caring of poisoning patients. While, 42.5% of them had positive attitude.

ISSN 2786-0183
Helwan International Journal for Nursing Research and Practice
Vol. 4, Issue. 10, Month: June 2025, Available at: https://hijnrp.journals.ekb.eg/

Table (2): Relation between demographic data of the studied nurses and their knowledge regarding toxicological emergencies in the emergency department (n=40).

Demographic data		Levels of knowledge						X^2	P-Value
		Poor (n=5)		Fair (n=27)		Good (n=8)			
		No.	%	No.	%	No.	%		
Gender	Female	4	80	18	66.6	7	87.5	1.505	0.471
	Male	1	20	9	33.34	1	12.5		
Age	20 - <30 yrs	3	60	17	62.9	5	62.5	5.361	0.498
	30 - <40 yrs	0	0	7	25.9	2	25		
	40 - <50 yrs	2	40	2	7.5	1	12.5		
	50 ≤ yrs	0	0	1	3.7	0	0		
Qualification	Diploma Nurse	3	60	7	25.9	5	62.5	6.530	0.366
	Technical Nurse	2	40	13	48.14	3	37.5		
	Bachelor	0	0	5	18.51	0	0		
	Postgraduate studies	0	0	2	7.45	0	0		
Job position	Staff nurse	5	100	22	81.48	7	87.5	1.724	0.786
	Charge nurse	0	0	3	11.12	1	12.5		
	Head nurse	0	0	2	7.40	0	0		
Experience in poisoning management	< 5 yrs	5	100	20	74.07	5	62.5	4.846	0.304
	5 – <10 yrs	0	0	4	14.81	3	37.5		
	≥10 yrs	0	0	3	11.12	0	0		
Training in poisoning management	No	5	100	21	77.77	5	62.5	2.485	0.289
	Yes	0	0	6	22.23	3	37.5		

X^2= chi square test. No significant at p > 0.05.

Table (2) displayed that, there was no statistically significant relation between nurses' knowledge and demographic data of the studied nurses.

Table (3): Relation between demographic data of the studied nurses and their practices regarding toxicological emergencies in the emergency department **(n=40).**

Demographic data		Levels of practice						X^2	P-Value
		Incompetent (n=3)		Acceptable (n=31)		Competent (n=6)			
		No.	%	No.	%	No.	%		
Gender	Female	3	100	21	67.5	5	83.33	1.843	0.398
	Male	0	0	10	32.5	1	16.67		
Age	20 - <30 yrs	2	66.66	20	64.50	3	50	5.417	0.491
	30 - <40 yrs	0	0	8	25.80	1	16.67		
	40 - <50 yrs	1	33.34	2	6.45	2	33.33		
	50 ≤ yrs	0	0	1	3.25	0	0		
Qualification	Diploma Nurse	3	100	10	32.25	2	33.33	7.388	0.286
	Technical Nurse	0	0	14	45.16	4	66.67		
	Bachelor	0	0	5	16.14	0	0		
	Postgraduate studies	0	0	2	6.45	0	0		

ISSN 2786-0183
Helwan International Journal for Nursing Research and Practice
Vol. 4, Issue. 10, Month: June 2025, Available at: https://hijnrp.journals.ekb.eg/

Job position	Staff nurse	3	100	26	83.87	5	83.33	1.237	0.872
	Charge nurse	0	0	3	9.68	1	16.67		
	Head nurse	0	0	2	6.45	0	0		
Experience in poisoning management	< 5 yrs	3	100	24	77.41	3	50	6.166	0.187
	5 – <10 yrs	0	0	4	12.90	3	50		
	≥10 yrs	0	0	3	9.68	0	0		
Training in poisoning Management	No	3	199	25	80.65	3	50	3.649	0.161
	Yes	0	0	6	19.35	3	50		

X^2= chi square test. No significant at p > 0.05.

Table (3) displayed that, there was no statistically significant relation between nurses' practice and demographic data of the studied nurses.

Table (4): Relation between demographic data of the studied nurses and their attitude regarding toxicological emergencies in the emergency department (n=40).

Demographic data		**Levels of attitude**				**X^2**	**P-Value**
		Negative (n=23)		**Positive (n=17)**			
		No.	**%**	**No.**	**%**		
Gender	Female	16	69.50	13	76.50	0.234	0.629
	Male	7	30.50	4	23.50		
Age	20 - <30 yrs	16	69.50	9	52.95	2.426	0.489
	30 - <40 yrs	5	21.75	4	23.50		
	40 - <50 yrs	2	8.75	3	16.65		
	50 ≤ yrs	0	0	1	5.90		
Qualification	Diploma Nurse	7	30.50	8	47.05	1.898	0.594
	Technical Nurse	11	47.85	7	41.25		
	Bachelor	4	17.40	1	5.85		
	Postgraduate studies	1	4.35	1	5.85		
Job position	Staff nurse	20	86.95	14	82.35	0.162	0.922
	Charge nurse	2	8.70	2	11.75		
	Head nurse	1	4.35	1	5.90		
Experience in poisoning management	< 5 yrs	17	73.90	13	76.50	1.281	0.527
	5 – <10 yrs	5	21.75	2	11.75		
	≥10 yrs	1	4.35	2	11.75		
Training in poisoning management	No	17	73.90	14	82.35	0.399	0.527
	Yes	6	26.10	3	16.65		

X^2= chi square test. No significant at p > 0.05.

Table (4) displayed that, there was no statistically significant relation between nurses' attitude and demographic data of the studied nurses.

ISSN 2786-0183
Helwan International Journal for Nursing Research and Practice
Vol. 4, Issue. 10, Month: June 2025, Available at: https://hijnrp.journals.ekb.eg/

Table (5): Correlation between total knowledge score, total practices score, total attitude score regarding toxicological emergencies. **(n=40).**

Items	Knowledge		Practice	
	R	P-Value	R	P-Value
Practices	0.451	0.003**		
Attitude	-0.472	0.002**	-0.138	0.397

r= Pearson correlation test. No significant at p > 0.05 **Highly significant at p ‹ 0.01.

Table (5) indicated that, there was highly statistically significant positive correlation between knowledge score and practice score regarding toxicological emergencies (P= < 0.01). While, there was highly statistically significant negative correlation between knowledge score and attitude score (P= < 0.01). and there was no statistically significant correlation between practice and attitude at (P= > 0.05).

Discussion:

Toxicological emergencies in emergency departments pose significant challenges, requiring nurses to apply specialized knowledge and skills based on evidence-based guidelines to ensure patient safety and effective management. These emergencies often involve complex clinical decisions related to airway management, gastrointestinal decontamination, antidote administration, and identifying specific poisons. Nurses play a critical role in early recognition, stabilizing patients, and preventing further harm. Effective management also necessitates fostering empathy and positive attitudes toward poisoned patients, particularly in cases of intentional poisoning **(Deitche, 2022).**

This study aimed to assess nurses' performance regarding toxicological emergencies in the emergency department according to evidenced nursing guidelines through the following objectives:

To assess nurses' knowledge regarding toxicological emergencies in the emergency department according to evidenced nursing guidelines. To assess nurses' practices regarding toxicological emergencies in the emergency department according to evidenced nursing guidelines. To assess nurses' attitude regarding toxicological emergencies in the emergency department according to evidenced nursing guidelines

Regarding demographic characteristics, the current study findings were presented the distribution of studied nurses as more than three quarters of the studied nursing personnel were female with a male to female ratio is 0.2:1.

Regarding age, more than half of the studied nurses were between twenty and less than thirty years old. In relation to job position, majority of the studied nurses were staff nurses because the toxicology centers do not have multiple departments and do not have many leaders. As per training in poisoning management, the majority of the studied nurses did not receive training in poisoning management.

In relation to total level of knowledge regarding toxicological emergencies among the studied nurses. The study indicated that more than two thirds of the studied nurses had fair knowledge about toxicological emergencies. Moreover, less than one fifth of them had good knowledge regarding toxicological emergencies. On the other hand, less than one fifth of the studied nurses had poor knowledge regarding toxicological emergencies.

The study finding was in the same line with the study conducted at Public Hospitals of Bahir Dar City by **Adal et al, (2023)** entitled "Knowledge, Attitude, and Practice of Nurses Toward the Initial Managements of Acute Poisoning in Public Hospitals of Bahir Dar City" and the study documented that slightly more than half of the nurses had satisfactory level of knowledge regarding initial management of acute poisoning.

In converse, the study finding was inconsistent with the study carried out at poisoning center in Al-Mansura city by **Saad et al., (2021)** entitled "Critical care nurses' knowledge and practices about toxicological emergencies" and indicated that more than half of the nurses had poor overall knowledge concerning the toxicological emergencies while less than half of the nurses had fair levels of knowledge

ISSN 2786-0183
Helwan International Journal for Nursing Research and Practice
Vol. 4, Issue. 10, Month: June 2025, Available at: https://hijnrp.journals.ekb.eg/

and minority of nurses had good knowledge regarding toxicological emergencies.

Considering the level of practice regarding toxicological emergencies of the studied nurses' personnel. The study results mentioned that slightly more than three quarters of nurses had acceptable levels of practice while less than one fifth of nurses were competent and minority of the studied nurses were incompetent regarding management of poisoned patient.

As well the study finding was consistent with study results conducted in the emergency department of different governmental hospitals in Philippines by **Villanueva (2024)** entitled "Knowledge and practices of nurses in emergency care management of toxicology cases" and revealed that majority of emergency room nurses primarily had good practices on the several general concepts performed during the provision of emergency nursing care to toxicology cases.

In contrast, the study finding was incompatible with the study result conducted by **El Awady et al., (2022)** entitled Nurses' Knowledge and Practice toward Children with Accidental Poisoning in Zagazig Poison Control Centers" and the study indicated that more than half of studied nurses had unsatisfactory practice about accidental poisoning, while around one third had satisfactory practice.

Concerning nurses' attitude toward caring for poisoning patients, the study results revealed that more than half of the studied nurses had a negative attitude toward caring of poisoning patients while less than half of the nurses had positive attitudes.

The study finding was in the same line with the study results published at Emergency care journal by **Sharifi et al., (2023)** entitled "Emergency department nurses' perceptions of caring for patients with intentional self-poisoning: a qualitative study" and showed that the emergency department nurses were reluctant to provide care for patients with intentional self-poisoning.

On the other hand, result finding was incompatible with study conducted at South Gondar zone hospitals, Ethiopia by **Tassew et al., (2022)** entitled "Knowledge, Attitude and Practice of nurses working in south Gondar zone hospitals toward initial management of acute poisoning" and the study revealed that majority of nurses had positive attitude toward initial management of acute poisoning.

Regarding the relationship between nurses' knowledge and demographic data of the studied nurses. The study results displayed that there was no statistically significant relation between nurses' knowledge and demographic data of the studied nurses.

Concerning the relationship between nurses' practice and demographic data of the studied nurses. The study results demonstrated that there was no statistically significant relation between nurses' practice and demographic data of the studied nurses.

Regarding the relationship between nurses' attitude and demographic data of the studied nurses**.** The study results demonstrated that there was no statistically significant relation between nurses' attitude and demographic data of the studied nurses.

Concerning the correlation between knowledge, practice and attitude of the studied nurses. The study indicated that, there was highly statistically significant positive correlation between knowledge score and practice score regarding toxicological emergencies (P= < 0.01). While, there was highly statistically significant negative correlation between knowledge score and attitude score (P= < 0.01). and there was no statistically significant correlation between practice and attitude at (P= > 0.05).

On the same vein, the study results were in accordance with the study conducted at Poisoning Control Center at Tanta University Hospitals and Elmanshawy General Hospital by **Allam et al., (2021)** entitled "Effect of Emergent Nursing Educational intervention on Nurses' Performance for Patients with acute poisoning". The study results revealed that there were positive statistically significant correlations between total knowledge and total practice scores among the studied nurses.

In converse, the study finding was incompatible with the study results published at International Journal of Research Studies in Psychology by **Villanueva et al., (2024)** entitled "Knowledge and practices of nurses in emergency care management of toxicology cases". The study results displayed that there was no statistically significant relationship between knowledge and practices of the studied nurses in the emergency care management of toxicology cases.

ISSN 2786-0183
Helwan International Journal for Nursing Research and Practice
Vol. 4, Issue. 10, Month: June 2025, Available at: https://hijnrp.journals.ekb.eg/

The results of the current study answered the study research questions. Also, the present study results accomplish the study aim to assess nurses' performance regarding toxicological emergencies in the emergency department according to evidenced nursing guidelines.

Conclusion

According to the findings of the present study, more than two thirds of the studied nurses had fair knowledge about toxicological emergencies and slightly more than three quarters of nurses had acceptable levels of practice regarding toxicological emergencies. Also, more than half of the studied nurses had a negative attitude toward caring of poisoning patients.

Moreover, the study findings highlight a statistically significant positive correlation between knowledge and practice. Conversely, the significant negative correlation between knowledge and attitude regarding caring of poisoning patients.

Recommendations

Based on the current study findings, the following recommendations were proposed:

- Develop and implement regular training workshops focusing on evidence-based nursing guidelines for managing toxicological emergencies
- Include emotional resilience and stress management programs in nursing education
- Establish access to mental health support or counseling for nurses to address negative attitudes
- Ensure the availability and accessibility of clear, evidence-based protocols for managing toxicological emergencies.

REFERENCES

Adal O, Hiamanot Y, Zakir A, Regassa R, Gashaw A. (2022): Knowledge, Attitude, and Practice of Nurses Toward the Initial Managements of Acute Poisoning in Public Hospitals of Bahir Dar City, Northwest Ethiopia : Cross-Sectional Study. SAGE Open Nursing. 2023;9. https://doi:10.1177/23779608231157307.

Allam, Z., Mohammed, S., Abdelaziz Ismail, A., Nagy, A., & Al-Metyazidy, H. (2021). Effect of Emergent Nursing Educational intervention on Nurses' Performance for Patients with acute poisoning. *Tanta Scientific Nursing Journal*, *21*(2), 224-245.

Anderson, M. (2021). Initial management of suspected poisoning in children and young people. Paediatrics and Child Health, 31(10),382–387. https://doi.org/10.1016/j.paed.2021.07.003

Azharuddin, S., Ogbebor, O., Shuster, M., Smith, B., Arshad, H., & Cheema, T. (2023). Toxicological emergencies. *Critical Care Nursing Quarterly*, *46*(1), 82-99.

Barbera, J., Naibert, N., Komperda, R., & Pentecost, T. C. (2021). Clarity on Cronbach's alpha use. *Journal of Chemical Education*, *98*(2), 257–258. https://doi.org/10.1021/acs.jchemed.0c00183.

Chatterjee S, Verma VK, Hazra A, Pal J. (2020): An observational study on acute poisoning in a tertiary care hospital in West Bengal, India. Perspect Clin Res. AprJun;11(2):75-80. doi: 10.4103/picr. PICR_181_18. Epub 2020 May 6. PMID: 32670832; PMCID: PMC7342341.

Chua WL, Teh CS, Basri MABA, Ong ST, Phang NQQ, Goh EL. (2022): Nurses' knowledge and confidence in recognizing and managing patients with sepsis: A multi-site cross-sectional study. J Adv Nurs. 2023 Feb;79(2):616-629. doi: 10.1111/jan.15435. Epub 2022 Sep 7. PMID: 36069994; PMCID: PMC10087790.

Deitche, A. L., & Burda, A. M. (2022). Management of Toxicological Emergencies in the School Setting: Part 1 An Overview for School Nurses. *NASN school nurse (Print)*, *37*(4), 184–189. https://doi.org/10.1177/1942602X221090614.

El Awady Bassam, S., Fahad Al Hosis, K., Mosbah Elsayed Mohamed, N., Abdelateef Abdelaziz ramadan, R., & Nabeel Mohammad Abd-Elmegeed, F. (2022). Nurses' Knowledge and Practice toward Children with Accidental Poisoning in Zagazig Poison Control Centers. *Egyptian Journal of Health*

ISSN 2786-0183
Helwan International Journal for Nursing Research and Practice
Vol. 4, Issue. 10, Month: June 2025, Available at: https://hijnrp.journals.ekb.eg/

Care, *13*(3), 1178-1189. doi: 10.21608/ejhc.2022.258659.

Getie A, Belayneh YM. (2020): A Retrospective Study of Acute Poisoning Cases and Their Management at Emergency Department of Dessie Referral Hospital, Northeast Ethiopia. Drug Healthc Patient Saf. 2020 Mar 5;12:4148. doi:10.2147/DHPS. S241413. PMID: 32184673; PMCID: PMC7062390.

Halawa, H., Nageeb, S., & El Guindi, M. (2013). Annual Report of the Poison Control Centre, Ain Shams University Hospitals, Cairo, Egypt, 2012. *Ain Shams Journal of Forensic Medicine and Clinical Toxicology*, *21*(2), 27-34. doi: 10.21608/ajfm.2013.19165.

Hussein Ahmed Mohamed, S., Abd Elaziz Mohamed, M., Faheem Gendy, J., & Nabil Abd Elsalam, S. (2020). Nurses Performance for Patient with Acute Organophosphate Poisoning. Egyptian Journal of Health Care, 11(4), 1212-1227. doi: 10.21608/ejhc.2021.198459

Mohamed, S. H. A. (2020). Nurses Performance for Patient with Acute Organophosphate Poisoning (Doctoral dissertation, Ain Shams University).

Poison control and unintentional poisoning. (2022) retrieved from 9 June 2022, available at https://www.who.int/data/gho/data/themes/topices/indicatorgroups/ poison-control- and-unintentional-poisoning.

Saad Hassan, S., Abo El-Ata, A., & Abdu El- kader, H. (2021). Critical care nurses' knowledge and practices about toxicological emergencies. Port Said Scientific Journal of Nursing, 8(3), 68-83. doi: 10.21608/pssjn.2021.75367.1108.

Sharifi, Salar & Valiee, Sina. (2023). Emergency department nurses' perceptions of caring for patients with intentional self-poisoning: a qualitative study. Emergency Care Journal. 19. 10.4081/ecj.2023.11220.

Tassew, S. F., Feleke, D. G., Chane, E. S., Birile, T. A., Amare, A. T., Dessalegn, W., & Yegizwa, E. S., (2022). Knowledge, Attitude and Practice of nurses working in south Gondar zone hospitals toward initial management of acute poisoning. The Pan African Medical Journal. 7 (32). PP.1-9.DOI: https://doi.org/10.11604/pamjoh.2022.7.32.32311.

Villanueva, J. L. (2024). Knowledge and practices of nurses in emergency care management of toxicology cases. *International Journal of Research Studies in Psychology*, *10*(1), 61-75. https://doi.org/10.5861/ijrsp.2024.005

Wong, K. Lit , Klaassen, . Curtis D. and Halstead, . Bruce W. (2024, October 17). poison. Encyclopedia Britannica. https://www.britannica.com/science/poison-biochemistry.