Nurses' Adherence to National General Patient Safety Standards in accordance with The General Authority for Healthcare Accreditation and Regulations in Critical Care Units.

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*Background: Nurses' adherence to national safety requirements is paramount in healthcare settings. By upholding safety standards, nurses foster a culture of alertness and responsibility, making healthcare safer for everyone. When nurses follow the national general patient safety standards, they help patients receive better care, prevent medical errors, and develop patient-provider confidence. **Aim:** The study aimed to determine nurses' adherence to national general patient safety standards set by the General Authority for Healthcare Accreditation and Regulations in Critical Care Units. **Settings:** The study was conducted at Alexandria Main University Hospital, in all the critical care units of the hospital (N = 10). **Subjects:** All nurses with permanent employee status working in critical care units (N = 70) **Tool:** The GAHAR self-assessment tool was used to assess nurses' adherence level to the National General Patient Safety Standards (N = 11) by the National Safety Requirements (NSRs) through the adoption of three user guides, namely the Nurses' Knowledge Self-administered Questionnaire. The National General Patient Safety Standard observation checklist and the audit checklist. **Results**: the current study found that 91.43% of the studied nurses fully met the standards, with a mean percentage score of (86.15%). moreover, (84.28%) of the nurses were found to have met the knowledge adherence level, with a mean score percent of 90.06%, more than three quarters (77.14%) of them partially met the level of documentation with a mean score percent= (69.39%), the majority of studied nurses (90.00%) met the adherence level of observed practices regarding the implementation of national general patient safety standards with a mean percentage score of 87.56%. Also, there was a correlation between the name of the unit where nurses work and the overall level of adherence to national general patient safety requirements by all nurses, (F = 2.423, P<0.020). **Recommendation:** Nurses' leadership capabilities should be enhanced through continuous training initiatives and workshops, including courses on patient safety standards, proactive supervision, ongoing performance assessment of nurses, and regular audits. Furthermore, sufficient resources should be allocated to ensure nurses' adherence to national patient safety standards.*

Introduction

High-quality healthcare involves assessing and providing safe, efficient care in an environment focused on excellence, resulting in optimal health outcomes (Alenezi, et al., 2022). The demand for quality healthcare should be prioritized, as it is a complex issue affecting patients, organizations, and scientists alike (Ouzounakis, et al., 2023). A crucial element of universal healthcare is quality. The quality of care is largely determined by the extent to which health services implement the most recent evidence-based professional knowledge and practice. This has an impact on the likelihood that individuals and communities will experience the intended health improvements (WHO, 2024). As Busse et al. (2019) mentioned, the three key components of high-quality healthcare are patient safety, effectiveness, and responsiveness / patient-centeredness. Nurses play a crucial role in ensuring patient safety as they are directly involved in patient care. From a patient safety perspective, a nurse's responsibilities include monitoring patients for any decline in their condition, identifying errors and near misses, understanding care processes and system weaknesses, recognizing and communicating changes in a patient's condition, and carrying out numerous other tasks to ensure that

patients receive high-quality care (Phillips et al., 2021). In 2018, the Egyptian Ministry of Health and Population launched the National Health Insurance Program (NHIP), which aims to provide universal health coverage to all Egyptians (WHO, 2021). As published by Ahram Online (2022), Egypt's General Authority for Healthcare Accreditation and Regulation (GAHAR) established in 2018, is the first organization in Egypt, the second in Africa, and the third in the Middle East to be awarded the certification of International Society for Quality in Healthcare (ISQua) The GAHAR Egyptian Accreditation Program entails a thorough examination and assessment of the healthcare organization by GAHAR's surveyor team, supporting patient-focused healthcare services following standards established for a long-lasting safety culture and a continuous improvement approach (GAHAR 2021). Hospitals must demonstrate their commitment to patient safety as part of the GAHAR registration procedure. This requires compliance with each of the National Safety Requirements (NSRs).. The most important components of patient general safety requirements are patient identification, verbal and telephone orders, hand hygiene, catheter and tube misconnections, fall screening and prevention, pressure ulcer prevention, handover communication, critical alarms, recognition of and response to clinical deterioration, venous thromboembolism reduction, and Critical Results (GAHAR 2021). Less patient falls, medication errors, pressure ulcers, healthcare-associated infections, physical restraints, vascular access device reactions, mortality, and lower patient dissatisfaction were reported by nurses with a good safety attitude and adverse patient outcomes were decreased as a result of effective teamwork (Alanazi et al., 2022). Nurses in healthcare facilities must adhere to patient safety standards to provide high- quality care. This includes clearly defined policies, competent leadership, research- based safety measures, adequate training, and patient involvement. Measures intended to prevent errors in practice and create sustainable and safer healthcare systems are unlikely to succeed if nurses do not uphold

patient safety standards (Vaismoradi et al., 2020). During the development of the GAHAR standards, careful consideration was given to Egypt's 2030 Vision and the healthcare landscape. Extensive comparisons with international standards were conducted, revealing alignment with Egyptian laws, regulations, and culture. GAHAR (2021) anticipates that these standards will act as a driving force for enhancing and transforming Egypt's healthcare system and culture.

In readiness for accreditation registration in line with the forthcoming phase of Alexandria Governorate's comprehensive health insurance system implementation, it is essential to assess nurses' adherence to the National general patient safety requirements specified in the NSRs (National Safety Requirements).

Aim of the Study

This study aims to determine nurses' adherence to national general patient safety standards in accordance with The General Authority for Healthcare Accreditation and Regulations in Critical Care Units at Alexandria Main University Hospital.

Research questions

What is the level of nurses' adherence to national patient safety standards in critical care units, according to the general authority for healthcare accreditation and regulations?

Materials and Method

Materials

Design: A descriptive research design was used to achieve the study's aim

Settings: The study was conducted at Alexandria Main University Hospital in critical care units (N = 10).

Subjects: The target population of the current study is nurses working in critical care units. Out of 163 (total population), a sample size of 70 was included in the study. A non-probability sampling technique was used to recruit the study participants with the following inclusion criteria: working at critical care units during the morning and Evening shifts, having direct contact with patients, providing direct and indirect care to them, having work years of

experience not less than six months, having no administrative responsibilities, being on duty at the time of data collection, and being willing to participate in the study.

___Tools:___ To collect the necessary data for the study one tool was used:

The GAHAR self-assessment tool

This tool was developed by GAHAR in 2021 for self-assessment of hospital registration requirements. It was used in this study to assess nurses' adherence to the National General Patient Safety Standards (N = 11) in accordance with the National Safety Requirements (NSRs).

The scoring system, according to GAHAR, ranged from (2) meeting the standard to (0) not meeting it. (2) Was given for "correct, complete" answered questions; (1) for "incorrect, incomplete" answered questions; and (0) was given for "wrong, not answered questions."

The adherence was measured for each standard; scores were summed up and converted into a percent score according to the GAHAR scoring system as follows:

• _More than 80% of the maximum score represented "met the standard adherence level."_

• _From 50% to less than 80% of the maximum score, "Partially met the standard adherence level ."_

• _Less than 50% of the maximum score represented "not meeting the standard adherence level."_

Each standard is scored for nurses' adherence level. The researcher adopted three user guides, namely:

Guide 1: Nurses' Knowledge Self-administered Questionnaire:

It was developed by the researcher in the Arabic language based on National safety requirements (NSRs). It was used to assess the nurses' knowledge regarding the National

General Patient Safety Standards (N = 11). It consists of two main parts:

The first part:

It concerned the socio-workplace professional characteristics of the study subjects, including personal and professional data such as age, gender, qualifications, clinical experience, and training courses regarding the National General Patient Safety Standards.

Second part:

It concerned assessing nurses' knowledge regarding the National General Patient Safety Standards. It consists of 47 multiple-choice questions (MCQs) classified under 11 standards, namely: patient identification, verbal and telephone order, hand hygiene, catheter and tube misconnection ,fall screening and prevention, pressure ulcer prevention, handover communication, critical alarms, recognition and response to clinical deterioration, venous thromboembolism prophylaxis ,and critical results. Nurses' responses were measured and scored according to the GAHAR scoring system.

Guide 2: National General Patient Safety Standards observation checklist:

It was developed by the researcher based on NSR requirements [GAHAR] (2021), and it was used to observe the nurses' practices regarding National General Patient Safety Standards. It consists of 36 items classified under nine standards, namely: patient identification, catheter and tube misconnection, hand hygiene, fall screening and prevention, pressure ulcer prevention, handover communication, critical alarms, recognition and response to clinical deterioration. Nurses' practice was checked and scored according to GAHAR scoring system.

Guide 3: Auditing Checklist:

It was developed by the researcher based on NSR requirements [GAHAR] (2021), and it was used for auditing the nurses' documentation regarding National General

Patient Safety Standards. It consists of 14 items classified under nine standards: patient identification, verbal and telephone orders, catheter and tube misconnection, fall screening and prevention, pressure ulcer prevention, handover communication, recognition and response to clinical deterioration, venous thromboembolism prophylaxis, and critical results. Nurses' documentation was assessed and scored according to GAHAR scoring system.

The sum of the three user guide scores (Nurses' knowledge questionnaire, observation checklist, and auditing checklist) was calculated to determine the overall score of each standard, and finally, the cumulative score of all overall national general patient safety standards (N = 11) was calculated to assess the level of nurses' adherence to national general patient safety standards, the scores were summed up and converted into a percent score according to the GAHAR scoring system.

Method

Approval for conducting the study was obtained from the Research Ethics Committee, Faculty of Nursing, Alexandria University with permission no 2022-7-41, IRB0001.3620 (9/19/2025). Written approval was obtained for conducting the study from the hospital administrative authority after explaining the aim of the study. The three user guides of the GAHAR self-assessment tools developed by the researcher were translated into Arabic, and back-to-back translation was done and tools were tested for their face and content validity by a jury of five experts in the field of the study and accordingly, the necessary modifications have been made .

A Pilot study was carried out on 10% of the study subjects (N=7) nurses to test the clarity, applicability, and feasibility of the study tools and to determine the needed time for data collection. The pilot study demonstrated the clarity of study tools, no modifications were done and Participants in the pilot study were included in the study sample.

The reliability of the study tools was tested to measure the internal consistency of the items using Cronbach's alpha coefficient test. The reliability of the Nurses' Knowledge Self-administered questionnaire was 0.867, the National General Patient Safety Standards observation checklist was 0.683, and the auditing Checklist was 0.665 which proved the three user guides for the GAHAR tools were reliable.

Data collection for this study was conducted by the researcher through:

- The researcher provided the study participants with a self-administered questionnaire to assess their knowledge about general patient safety standards (N = 11). The researcher gave instructions on how to complete the questionnaire and was available to answer any questions.

- Observation of nurses' practices was carried out for each nurse via concealed observation technique to assess her/his adherence to general standards of patient safety with the use of an observation practice checklist, observation was carried throughout the work time for approximately 20-30 minutes to collect the needed data for three times at the (beginning, middle, and end of the shift) during morning and evening shifts, the night shift was excluded due to the lack of nursing activities and the small number of nurses during the night shift as well as because patients sleep during this time. The observation time was based on the time taken until the required items of observation for each standard were fully met.

- Concurrent audit using auditing checklist to collect the necessary data concerning Nurses' documentation of NSRs National standards of general patient safety were carried out using an individually tailored checklist.

  Data collection was carried out by a group of registered nurses, consisting of three nurses, after training by the researcher and sharing the work of data collection with the researcher. Data

collection started on May 27, 2023, and ended on July 10, 2023.

Ethical considerations:

A written informed consent from the study subjects was obtained after explaining the aim of the study. The written witness consent of the head nurses of critical care units for observation was obtained after explaining the aim of the study. Confidentiality of data was maintained, the anonymity of the study participants was kept, and the subjects were participating in the study voluntarily and had the right to withdraw at any time from the study without any penalties.

Statistical Analysis

After data were collected it was revised, coded, and fed to statistical software IBM SPSS version 25. The reliability of the tools was determined by Cronbach's alpha. Frequency tables and cross-tabulation were used to illustrate the results. Quantitative data were summarized by the arithmetic mean, standard deviation, and mean score percent. All statistical analysis was done using two-tailed tests and an alpha error of 0.05. A P-value less than or equal to 0.05 was considered to be statistically significant.

Results

Table 1 presents the distribution of the study subjects according to their personal and -work-related professional data. It revealed that most nurses 47.1% were aged between 30 and 40 years, while the lowest percentage 18.6% ranged from 40 to 50 years with a mean± SD of (33.43± 3.02). It shows that more than two-thirds of subjects (64.3%) are female. Less than half of the nurses, (44.3%) have a technical nursing diploma, while the lowest percentage 18.6% have a bachelor's degree. About one-quarter of the study subjects (24.3%) were working in toxicology care units. According to nursing years of experience, more than one-third (34.3%) of them had years of experience ranging from 10–< 20 years, while the lowest percentage 17.1% had years of experience ranging from

5–< 10 years with a mean± SD of 14.38± 6.78. More than half of nurses (51.4%) are working in work morning shifts, while 48.6% work the evening shift. All staff nurses (100%) attend training programs related to patient safety, organized by continuous training and health education teams.

Table 2 Presents the total nurses' level of knowledge regarding adherence to national general patient safety standards. It reveals that the majority of the study subjects (84.28%) met the overall knowledge level regarding the 11 standards of national general patient safety with a mean± SD of 84.66 (out of 94) ±9.05 and a mean score percent (90.06%). The vast majority 98.57% of nurses fully met the knowledge level of **NSR04**, **preventing catheter and tubing misconnection,** with a mean± SD of 7.97 (out of 8) ±0.24 and a mean score percentage of 99.63%. While less than half of the nurses (45.71%) met the knowledge level of **NSR07 a standardized handover communication** with a mean± SD of 11.94 (out of 16) ±2.23 and a mean score percentage of 74.63%.

Table 3 presents the total nurses' adherence level to observed practices regarding the implementation of national general patient safety standards. It shows that the majority (90.00%) of the studied nurses met the overall adherence level of observed practices regarding the implementation of national general patient safety standards as shown in the table with a mean± SD of 63.04 (out of 72) ±3.88 and a mean percentage score of 87.56%. Moreover, the table shows that all nurses (100%) fully met the adherence level of observed practices regarding the implementation of NSR05 assessment and prevention of fall risks, with a mean± SD of 9.60 (out of 10) ±0.73 and a mean percent score of (96.00%). Less than half (41.43%) partially met and only (7.14%) did not meet the adherence level of NSR03 hand hygiene with a mean± SD of 8.91 (out of 12) ±2.49 and a mean score percentage of (74.25%). All (100%) partially met NSR09, wide recognition, and response to clinical deterioration with a mean percentage score of (50.00%).

Table 4 shows the adherence level to audited documentation of national general patient safety standards. The table shows that more than three-quarters (77.14%) of the studied nurses partially met the overall adherence level to audited documentation of national general patient safety standards with a mean± SD of 19.43 (out of 28) ±1.67 and the mean score percentage = (69.39). The table shows that all nurses fully met NSR02, receiving verbal or telephone orders, with a score percentage of 100%. The vast majority (94.29%) partially met NSR05, assessment, and prevention of fall risks with mean± SD=3.74 (out of 6) ±0.67 and mean score percentage= (62.33%), and NSR06, assessment, and prevention of pressure ulcers with mean± SD= 3.83 (out of 6) ±0.64, the mean score percentage= 63.83%. All nurses partially met NSR09-wide recognition and response to clinical deterioration, with a mean score percentage of 50.00%.

Table 5 presents the adherence level of nurses to national general patient safety standards in critical care units using the GAHAR self-assessment tools. The overall percentage of nurses' adherence to national general patient safety standards was 91.43%. Out of the studied nurses, 91.43% fully met the adherence level, with a mean score of 167.13 out of 194 (± 10.79) and a mean percentage score of 86.15%. The table also indicates that 84.28% of nurses met the knowledge level, with a mean percentage score of 90.06%. Observed practices were met by 91.4%, with a mean percentage score of 87.56%. Additionally, 77.14% partially met the documentation level, with a mean percentage score of 69.39%.

Table 6 presents the existence of a relationship between the nurses' total overall of the three user guides (test of knowledge, audited documentation, observed practices) and the name of the unit they work in (F = 2.423, P = 0.020*). The table reveals that the highest nurses' adherence to national general patient safety standards was in unit five with a Mean± SD of 172.40 (out of 194) ±7.40, while the lowest nurses' adherence to national general patient safety standards was

in unit three with a Mean± SD of 156.45 (out of 194) ± 20.28.

Discussion

Regarding nurses' level of knowledge about adherence to national general patient safety standards. The current study found that the majority of nurses met the knowledge level of national patient safety standards This result may be related to adequate training courses, on-the-job training, and ongoing monitoring by quality leaders and quality link nurses inside the critical care units. This result is consistent with that of Ywakaim Andrawes, et al. (2019), who found the majority of nurses have received sufficient training and have adequate knowledge of patient safety requirements. This finding is incompatible with that of Mamdouh et al. (2020), who found that nurses in intensive care units lacked adequate knowledge about patient safety measures, possibly due to the lack of available patient safety courses.

In relation to the observed practices about the implementation of national general patient safety standards. The study found that the majority of nurses complied with national general patient safety standards, this could be due to ongoing educational initiatives, performance evaluation, and constant oversight offered by nursing supervisors, as well as technical office guidelines and internal audit findings. This finding contradicts the findings of Mamdouh et al. (2020), who found that more than half of nurses in intensive care units did not adhere to patient safety measures, potentially due to insufficient in-service education and supervision. While, the results of the current study are consistent with the findings of Ywakaim Andrawes (2019), which indicated that the majority of nurses in the study exhibit adequate compliance with patient safety standards, assuming that accreditation assists in monitoring progress.

Concerning the Nurses' adherence level to audited documentation of national general patient safety standards, the study found that more than three-quarters of nurses partially met the level of audited documentation of national patient safety standards. This Could

be due to several factors, such as an increase in workload, time restraints, a lack of commitment from the leadership, a lack of strong documentation monitoring and auditing system, and a shortage of stationery resources.

This finding is consistent with research done by Elsayed Mansour, (2021), which found that most items were either not or incompletely documented and could be attributed to a shortage of nurses and increased workloads among nursing staff. While the current study result contradicts Ywakaim Andrawes, et al. (2019) findings, which revealed that most nurses adhere to documentation, possibly due to regular audits and accreditation requirements.

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Regarding the overall total adherence level to national general patient safety standards, the study found that the majority of nurses were fully met This could be attributed to ongoing education and training programs, continual performance monitoring, and prompt correction of malpractice. This is especially crucial as the Alexandria University Hospital gets ready to apply for national accreditation and is eager to meet these standards. This finding was consistent with Ywakaim Andrawes, et al., (2019) which supports the recommendation of all hospitals to pursue accreditation, as most staff nurses in accredited hospitals have satisfactory patient safety knowledge and compliance with national general patient safety standards.

However, the findings of the present study are inconsistent with those of Mamdouh, et al. (2020), who concluded that more than half of the study's nurses had unsatisfactory knowledge and performance regarding the implementation of patient safety measures.

The current study reveals a correlation between a nursing unit and the overall adherence to patients' national safety requirements; (F = 2.423, P<0.020*), this may be due to differences in nursing supervision, leadership commitment, training, and performance evaluation. The reasoning provided corresponds with Ayyad

et al.'s study (2024), which found that knowledge, attitudes, and practices toward patient safety among nurses in health centers are significantly influenced by continuing education, positive practice levels, teamwork improvement, and leadership support.

Conclusion

The study found that a high percentage (91.43%) of the nurses met the established standards. Additionally, a significant proportion (84.28%) demonstrated adherence to knowledge requirements. The majority of the nurses (90.00%) followed observed practices related to the implementation of national general patient safety standards. However, 77.14% of the study subjects only partially met the documentation standards. Furthermore, there was a correlation observed between the unit where nurses worked and their overall adherence to national general patient safety requirements (F = 2.423, p < 0.020).

Recommendations

Based on the study's findings, it is recommended to develop several strategies to improve leadership strength in healthcare settings. These include creating ongoing training programs to help leaders become positive role models, providing training to head nurses of critical care units, and teaching interpersonal and soft skills to be Successful communicators. Educational programs should focus on adherence to patient safety standards, such as hand hygiene, effective communication skills, and the application of standardized handover communication tools using several case studies and scenarios. Training should also enhance nurses' ability to document patient care, calculate NEWS scores, and recognize warning signs of clinical deterioration early. Proactive supervision and regular audits should be performed to ensure adequate adherence to national patient safety standards. Providing adequate resources needed to meet these standards.

Additional research is necessary to assess nurses' adherence to national safety standards in other hospitals and to explore the

correlation between nurses' assessments of the quality of nursing care and their compliance with national patient safety guidelines.

Table 1: Distribution of the study subjects according to their personal and work-related professional data

Personal and work-related data	Frequency (N=70)	Percentage %
Age		
▪ 20 – < 30 years	24	34.3
▪ 30 – < 40 years	33	47.1
▪ 40 – 50 years	13	18.6
Mean± SD	33.43± 3.02	
Range	30	
Median	30− <40	
Gender		
▪ Male	25	35.7
▪ female	45	64.3
Qualification		
▪ Bachelor's degree in nursing science	13	18.6
▪ Technical Institute Nursing Diploma	31	44.3
▪ Secondary School Nursing Diploma	26	37.1
The name of the unit you work in		
▪ Old Transitional Unit	5	7.1
▪ New Transition Unit	4	5.7
▪ Unit Two	12	17.1
▪ Unit Three	11	15.7
▪ Unit Four	3	4.3
▪ Unit Five	5	7.1
▪ Unit Six	7	10.0
▪ Toxicology Unit	17	24.3
▪ Kidney filtration care	3	4.3
▪ Emergency Anesthesia Care	3	4.3
Years of experience		
▪ <5 years	14	20.0
▪ 5 - <10 years	12	17.1
▪ 10 - <20 years	24	34.3
▪ 20-30 years	20	28.6
Mean± SD	14.38± 6.78	
Range	25	
Median	10- <20	
Duty time		
▪ Morning shift	36	51.4
▪ Evening shift	34	48.6
Attendance of training courses to apply national standards of patient safety		
▪ No	0	0.0
▪ Yes	70	100.0
If yes, mention where you got the training		
Continuous training and health education teams	70	100.00

Table 2: Total nurses' adherence level of knowledge regarding national general patient safety standards (N = 70).

NSR	Level	No.	%	N0. Of Items	Mean± SD	Mean score%
NSR01	Met(2)	67	95.71%	5	8.91±1.16	89.10%
	PM(1)	3	04.29%			
	NM(0)	0	00.00%			
NSR02	Met(2)	58	82.86%	3	5.60±0.94	93.33%
	PM(1)	10	14.29%			
	NM(0)	2	02.86%			
NSR03	Met(2)	69	98.57%	5	9.49±0.94	94.90%
	PM(1)	1	01.43%			
	NM(0)	0	00.00%			
NSR04	Met(2)	69	98.57%	4	7.97±0.24	99.63%
	PM(1)	1	01.43%			
	NM(0)	0	00.00%			
NSR05	Met(2)	33	47.14%	4	6.74±1.33	84.25%
	PM(1)	37	52.86%			
	NM(0)	0	00.00%			
NSR06	Met(2)	67	95.71%	6	11.54±1.03	96.17%
	PM(1)	3	04.29%			
	NM(0)	0	00.00%			
NSR07	Met(2)	32	45.71%	8	11.94±2.23	74.63%
	PM(1)	31	44.29%			
	NM(0)	7	10.00%			
NSR08	Met(2)	63	90.00%	3	5.74±0.83	95.67%
	PM(1)	5	7.14%			
	NM(0)	2	2.68%			
NSR09	Met(2)	64	91.43%	6	11.00±2.23	91.67%
	PM(1)	4	05.71%			
	NM(0)	2	02.86%			
NSR10	Met(2)	63	90.00%	2	3.80±0.60	95.00%
	PM(1)	7	10.00%			
	NM(0)	0	00.00%			
NSR11	Met(2)	76	95.71%	1	1.91±0.41	95.50%
	PM(1)	0	00.00%			
	NM(0)	3	04.29%			
Overall Nurses' adherence regarding knowledge	Met(2)	59	84.28%	47	84.66±9.05	90.06%
	PM(1)	9	12.86%			
	NM(0)	2	02.86%			

- *Met the standard adherence level of knowledge:* *Mean score percentage is more than 80% of the maximum score.*

- *Partially met the standard adherence level of knowledge:* *Mean score percentage is from 50 % to less than 80% of the maximum score .*

- *Not meeting the standard adherence level of knowledge:* *Mean score percentage is less than 50% of the maximum score.*

Table 3: Total nurses' adherence level of observed practices regarding implementation of national general patient safety standards (N = 70).

NSR	Level	NO.	%	No. of items	Mean ±SD	Mean score %
NSR01	Met(2)	55	78.57%	4	7.79±0.41	97.83%
	PM(1)	15	21.43%			
	NM(0)	0	00.00%			
NSR03	Met(2)	36	51.43	6	8.91±2.49	74.25%
	PM(1)	29	41.43			
	NM(0)	5	07.14%			
NSR04	Met(2)	63	90.00%	3	5.33±0.66	91.17%
	PM(1)	7	10.00%			
	NM(0)	0	00.00%			
NSR05	Met(2)	70	100%	5	9.60±0.73	96.00%
	PM(1)	0	00.00%			
	NM(0)	0	00.00%			
NSR06	Met(2)	68	97.14%	6	I0.69±0.53	89.08%
	PM(1)	2	02.86%			
	NM(0)	0	0000%			
NSR07	Met(2)	49	70.00%	4	6.74±0.76	84.25%
	PM(1)	21	30.00%			
	NM(0)	0	00.00%			
NSR08	Met(2)	66	94.29%	4	4.46±0.61	93.25%
	PM(1)	4	05.71%			
	NM(0)	0	00.00%			
NSR09	Met(2)	0	00.00%	2	2.79±0.41	69.75%
	PM(1)	70	100%			
	NM(0)	0	00.00%			
NSR10	Met(2)	52	74.29%	2	3.73±0.48	93.25%
	PM(1)	18	25.71%			
	NM(0)	0	00.00%			
Overall nurses' adherence level of observed practices	Met(2)	63	90.00%	36	63.04±3.88	87.56%
	PM(1)	7	10.00%			
	NM(0)	0	00.00			

- *More than 80% of the maximum score represented:* "met the standard adherence level of observed practices"

- *From 50% to less than 80% of the maximum score:* "Partially met the standard adherence level of observed practices".

- *Less than 50% of the maximum score represented*: "not meeting the standard adherence level of observed practices."

Table 4: Total nurses' adherence level to audited documentation of national general patient safety standards (N = 70).

NSR	Level	No.	%	No. of items	Mean± SD	Mean score %
NSR01	Met(2)	65	92.86%	1	1.93±0.26	96.50%
	PM(1)	5	07.14%			
	NM(0)	0	00.00%			
NSR02	Met(2)	70	100.00%	1	2.00.00	100%
	PM(1)	0	00.00%			
	NM(0)	0	00.00%			
NSR04	Met(2)	48	68.57%	1	1.69±0.47	84.50%
	PM(1)	22	31.43%			
	NM(0)	0	00.00%			
NSR05	Met(2)	1	01.43%	3	3. 74±0.67	62.33%
	PM(1)	66	94.29%			
	NM(0)	3	04.28%			
NSR06	Met(2)	1	01.43%	3	3.83±0.64	63.83%
	PM(1)	66	94.29%			
	NM(0)	3	04.28%			
NSR07	Met(2)	41	58.57%%	1	1.59±0.50	79.50%
	PM(1)	29	41.43%			
	NM(0)	0	00.00%			
NSR09	Met(2)	0	00.00%	1	1.00±00.00	50.00%
	PM(1)	70	100.00%			
	NM(0)	0	00.00%			
NSR10	Met(2)	68	97.14%	1	1.97±0.17	98.57%
	PM(1)	2	02.86%			
	NM(0)	0	00.00%			
NSR11	Met(2)	51	72.86%	1	1.74±0.44	87.00%
	PM(1)	19	27.14%			
	NM(0)	0	00.00%			
Overall nurses' adherence to audited documentation.	Met(2)	1	01.43%	14	19.43±1.67	69.39%
	PM(1)	54	77.14%			
	NM(0)	15	21.43%			

Table 5: Total nurses' adherence level to national general patient safety standards in critical care (N = 70).

User Guide	Level	No.	%	Mean± SD	Mean score %
Knowledge	Met(2)	59	84.28%	84.66±9.05	90.06%
	PM(1)	9	12.86%		
	NM(0)	2	02.86%		
Documentation	Met(2)	15	21,43%	19.43±1.67	69.39%
	PM(1)	54	77.14%		
	NM(0)	1	01.43%		
Observation	Met(2)	63	90.00%	63.04±3.88	87.56%
	PM(1)	7	10.00%		
	NM(0)	0	00.00%		
Total nurses' adherence to national general patient safety standards	Met(2)	64	91.43 %	167.13±10.79	86.15%
	PM(1)	6	08.57%		
	NM(0)	0	00.00%		

 According to the GAHAR scoring system:

• *More than 80% of the maximum score represented complete nurses 'adherence to the National General Patient Safety Standards .*

• *From 50% to less than 80% of the maximum score, nurses' adherence to the National general patient safety standards was incomplete or partially met .*

• *Less than 50% of the maximum score represented nurses' lack of adherence to the National general patient safety standards.*

Table 6: Relationship between overall total nurses' adherence level regarding knowledge, audited documentation, and observed practices of national general patient safety standards and their Personal and work-related data.

Socio-demographic data	Nurses' adherence level of overall knowledge, documentation and practices Mean± SD	Test of sig.	P value
Age			
• **20 − < 30 years** • **30 − <40 Years** • **40 – 50 Years**	167.42±6.70 167.91±10.60 164.62±16.60	**F=0.440**	**0.646**
Gender			
• **Male** • **Female**	167.32±6.93 167.02±12.51	**T=0.110**	**0.913**
Test of sig.(p)	**T=0.110(0.913)**		
Qualification			
• **Bachelor Degree of Nursing Science** • **Technical Institute Nursing Diploma** • **Secondary School Nursing Diploma**	168.15±5.77 168.48±7.28 165.00±15.31	**F=0.804**	**0.452**
• **Unit Name**			
• **Old Transitional Unit** • **New Transitional Unit** • **Unit Two** • **Unit Three** • **Unit Four** • **Unit Five** • **Unit Six** • **Toxicology Unit** • **Kidney Filtration Care** • **Emergency Anesthesia Care Unit**	170.40±1.14 164.75±10.28 168.67±6.71 156.45±20.28 166.00±5.20 172.40±7.40 169.86±5.81 171.94±2.75 159.67±10.41 164.00±8.72	**F=2.423**	**0.020***
• **Years of experience**			
• **< 5 Years** • **5 – <10 Years** • **10 − <20 Years** • **20 – 30 Years**	167.29±6.64 170.17±6.32 168.25±11.30 163.85±14.02	**F=1.020**	**0.389**
Duty Time			
• **Morning Shift** • **Evening Shift**	165.86±14.07 168.47±5.47	**T=1.011**	**0.316**

T: Independent Samples Test   F: One Way ANOVA

(*) Statistically significant at p< 0.05

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