The Review Of
DIABETIC
STUDIES OPEN ACCESS

Evaluation Of Staff Nurses' Proficiency In Safety Measures For Specific Practices:

Abrar Ali Wazqar[1], Bilqis Ahmed Alshareef[1], Samaher Sahal Malibari[1], Mohammed Ibrahim Mohammed Al Tukhays[2], Mariam Abdu Sharahili[3], Alanoud Miqad Qarrash Alotaibi[4], Sultan Mataab Nahad Alosaimi[4], Mohammad Abdulaziz Saad Algwai[4] Abdullah Bin Saleh Al-Rashidi[5], Abdulmohsen Muidh Jazi Alotaibi[6], Khaled Abdullah Shafi Al-Toum[7], Khaled Abdulrahman Zwaid Al-Qaddah[8], Hind Mohammed Hmod Albashiri[9]

[1]Family medicine senior registrar, Makkah health cluster, Saudi Arabia
[2]Nursing technician, Community Health Department at Dawadmi General Hospital, Saudi Arabia.
[3]Nursing Specialist, Al-Ahad General Hospital, Saudi Arabia.
[4]Technician-Nursing, Dawadmi General Hospital, Saudi Arabia.
[5]Nursing technician, Ahad Hospital AL Madinah AL Munawwarah, Saudi Arabia.
[6]NURSING, DAWADMI GENERAL HOSPITAL, Saudi Arabia.
[7]Nursing Specialist, Sajer General Hospital, Saudi Arabia.
[8]Nursing Technician, Al-Bujadiyah General Hospital, Saudi Arabia.
[9]Nursing Technician, Mojor Primary Healthcare Center, Saudi Arabia.

Abstract

Background: In order to reduce nursing errors, nursing competency and practice safety are important issues in clinical practice and nursing education settings. Nursing errors accounted for 25% of sentinel events in the healthcare industry, with the bulk of these errors being caused by healthcare professionals' ineptitude. The study's objective is to evaluate staff nurses' proficiency with safety precautions for particular procedures.

Research design: This study employed a descriptive research approach. 233 nurses was accepted to assigned in the research . Setting: East Jaddah Hospital . Data collecting tool: a single tool with two sections: a sociodemographic data sheet in part one and a performance check list in part two. Findings: two-thirds (63.3%) of nurses at East Jaddah Hospital did not follow infection control procedures. there was a statistically significant positive connection (p=0.001) between environmental safety, medicine delivery safety, and infection control competency. also, this study revealed that there is low competency level of staff nurses due to the lack of nursing competency assessment for nurses. Conclusion: this study revealed that there is low competency level of staff nurses, also it is important for integrating a structured nursing competency assessment that measures nursing competence in the nursing care delivery systems and determining the competency levels of nurses to ensure safe nursing practice.

Keywords: Nursing competency, safety of nursing practice.

Introduction:

Depending on their education, training, and the demands of the organization, nurses have varying levels of autonomy and responsibility in providing competent patient care within the legal and ethical bounds of nursing practice. Nurses are also required to be proficient in a variety of positions, including those of healthcare providers, educators, researchers, policymakers, advocates for clients, counselors, team members, case managers, administrators, community leaders, experts, and consultants. Nurses consistently exhibit their proficiency in technical skills, clinical practice, critical thinking, interpersonal relationships,

and organizational behavior, as well as their knowledge, abilities, and suitable attitudes.(Taleghani,et al 2023; Katelin,(2018).)

Nurses' professional development, self-assurance at work, and ability to provide patients with a safe and satisfying experience all depend on their ongoing competency assessments. A key and crucial element of high-quality care is patient safety. However, in order to keep patients safe in the modern healthcare setting, healthcare providers encounter numerous obstacles. As a result, nursing education and clinical practice compliance with accreditation, certification, and evidence-based practice standards, as well as high nursing competency, are key to the safety of nursing practice. (Axley, 2008, Ironside,. (2008).

The integration of evidence-based interventions and technological advancements also contribute to the ongoing evaluation of nurses' competency. This can be accomplished through an ongoing nursing competency assessment that is founded on a set of nursing practices that enable nurses to self-monitor, enhance their strengths, improve their weaknesses, exhibit their abilities, and identify knowledge, skill, and attitude gaps in order to maintain a high standard of nursing practices. (McKeon,et al., (2009).

The key competency criteria for advanced nursing practice that are connected to complexity and innovative to produce the best possible patient outcomes are outlined in the nursing competency-based practice framework. In order to evaluate nursing knowledge, clinical abilities, and attitudes in challenging clinical scenarios, it is crucial to balance education with clinical practice by creating competency-based practice standards for advanced degree-holding nurses. Nursing managers and executives may find it challenging to safeguard the public from mistakes and malpractice and to maintain the reputation of nursing as a profession in the absence of a well-structured nursing competency evaluation. (7, 8) Benner, P., Tanner, C. A., & Chesla, C. A. (Eds.). (2009); Whelan, (2006).

Significant of the study:

A nurse's performance on the job in maintaining safe nursing practice is reflected in the evaluation of nursing competence. A key tool for determining a nurse's level of competency and confirming whether or not they are capable of carrying out their duties effectively and safely is the nursing competency assessment. Numerous studies have documented the increase in nursing errors and the impact of nursing competence on nursing practice safety. The 2005 NCSBN report found that 25% of healthcare sentinel events were related to nursing errors, with the majority of these errors being caused by healthcare workers' incompetence. As a result, staff nurses must be more competent to ensure safe nursing practice (Bahgat, et al., 2013). thus this study will describe the level of nursing competence among staff nurses in their work

Aim of the study :

Assess the level of nursing competence among staff nurses in their work.

Research question :

What is the level of nursing competence among staff nurses in their work?

Material and methods :

A descriptive, cross- sectional design was used to conduct this study.

Settings:

The study was conducted in East Jeddah Hospital, it is is a governmental hospital with 300 beds situated in the western Saudi Arabian city of Jeddah. As one of the hospitals in the Jeddah governorate within the Ministry of Health's purview, the hospital offers its guests medical, diagnostic, surgical, and rehabilitation treatments. A prestigious group of medical professionals use the newest medical technology and equipment to deliver these services. On 20 Jumada Al-Akhirah 1437H, or March 29, 2016, the hospital was formally opened and started offering medical services in a number of areas, including general surgery and internal

medicine. Pediatrics, obstetrics and gynecology, and critical care for adults, children, and newborns are among the services that have been added over time. The hospital is being run by a team of healthcare providers and administrative staff from both self-employment and civil service recruitment programs.

s) Subjects:

The research population consisted of nurses who were employed permanently at specific the pre mentioned settings , whereas the total assigned population consisted of 250 nurses working in East Jeddah Hospital. The study excluded nurses with fewer than six months of work experience in the study area who worked in the chosen healthcare facilities . only 233 was returned the questionnaire to the researchers. Attrition rate: 6.8% and 93.2% response rate . .

Cross-sectional quantitative research design was used in this study. The research ethics committee of the Directorate of Health Affairs in Jeddah provided ethical permission. Consequently, all research activities were conducted in accordance with the ethical principles that govern nursing research procedures, and participants' informed agreement was obtained.

Data collection tool

Data was collected through utilization of one tool divided into two parts as follows:

Part (1) - Socio-demographic data sheet It was used to collect data about the socio- demographic characteristics of the study participants; it included (age, gender, education, and total years of experience in profession).

Part (2) - Check list performance

It was used to assess nursing performance, which developed by Ministry of Health in Saudi Arabia (nursing competency program, 2009) and Nadia A. Fentianah (2012). (10, 11) The tool was included three nursing core competencies that selected from six. The three selected core competencies included 29 items divided as infection control, which consisted of (10 items), medication administration safety, which consisted of (11 items) and environmental safety, which consisted of (8 items), each item was checked by researcher through observing staff nurses during the performance of their assigned duties.

The response for each item was checked as (done correctly =2, done incorrectly =1, and not done =0) and the scoring system was ranged from 0 to 58. The total score calculated by converting score into percentage % of performed care as follows (done correctly >75%, done incorrectly from (74 %-50%) and Not done < 50%).

The study tool was translated into Arabic, and an Arabic to English back-to-back translation was completed. Five subject-matter experts evaluated the research instruments' content validity, and several of the statements were reworded. To verify the clarity and applicability of the research tools, a pilot study was conducted on 5% (n=17) of the study sample after all necessary revisions. The reliability of the study tools was evaluated. employing the Cronbach's Alpha test. The reliability coefficients for tools one and two were.989

Data collection:

A self-administered questionnaire was used to collect data for this investigation. Each study participant took roughly 15 to 20 minutes to complete the questionnaire, which was hand delivered to them in their workplaces along with the necessary instructions prior to distribution. the information gathered during the course of two months, from September 28, 2024, to November 25, 2024.The study participants' anonymity and the data's confidentiality were guaranteed.

Statistical analysis:

The relationship between the structural empowerment and work engagement of nursesand the leadership style of clinical nurse mangers was ascertained using appropriate statistical analysis methods. The statistical analysis version 24 of the SPSS (Statistical Package for Social Science) tool was used to edit, code, and input the data after it had been collected. The statistical analysis metrics listed below were applied.

Descriptive statistical measures, included the mean with standard deviation and percentage

and frequencies to describe the scale and categorical data and description of the study subjects' characteristics, respectively. - Statistical analysis tests, which included: Chi square, T test and One way ANOVA (F-ratio test).

Results:

Table 1 indicates that the majority of nurses participating in the current study (37.8%) were between the ages of 30 and 40. Regarding the gender of public nurses, it was found that the majority were female (83.4%) and that nearly one third of them (26.8%) had completed secondary technical nursing school. Furthermore, the majority of nurses (24.2 %) had more than 20 years of experience, . Furthermore, most nurses (41.2%) have between 15 and 20 years of experience. Furthermore, 89.1% of nurses work more than or equal to 36 hours per week.

Table 1: Frequency distribution of nurses according to Socio demographic data

		Frequency	Percent 100.0
Sex	Female	196	83.4
	Male	39	16.6
Marital Status	Single	60	25.5
	Married	159	67.7
	Widow	10	4.3
	Divorced	6	2.6
Level of education	Secondary school	61	26.0
	Technical institute	79	33.6
	Bscs	94	40.0
	Master	1	.4
Current working units	Emergency	21	8.9
	ICU	112	47.7
	Endoscopy	14	6.0
	Renal dialysis	21	8.9
	In patients/words	67	28.5
Age	20<25	32	13.6
	25<30	58	24.7
	30<35	48	20.4
	35<40	41	17.4
	40<45	22	9.4
	45<50	13	5.5
	More than 50	21	8.9
Years of experience in nursing	Less than 5 years	75	31.9
	5≤10	42	17.9
	11≤15	31	13.2

	16≤20	29	12.3
	More than 20 year	58	24.7
Mean ±SD = 7.02±6.01			
Experience in the unit	Less than 5 years	130	55.3
	5≤10	54	23.0
	11≤15	26	11.1
	16≤20	13	5.5
	More than 20 year	12	5.1
Mean± SD = 13.30±9.79			

Table 2 denoted that more than two third of nurses do infection control practice correctly or incorrectly , while 39.9% not done as observed by the researchers..

Table 2: Frequency distribution of infection control competencies :

Infection control score	No	%
Done correctly	**87**	**38.6%**
Done incorrectly	**56**	**25.32**
Not done	**90**	**39.9**
Mean ±SD	**9.08±0.987**	

Figure 1 pointed that more than 40% of nurses administer medication safety practice not correctly , while 20% don't do any safety practice during medication administration.

Figure 3: Frequency distribution medication administration safety score

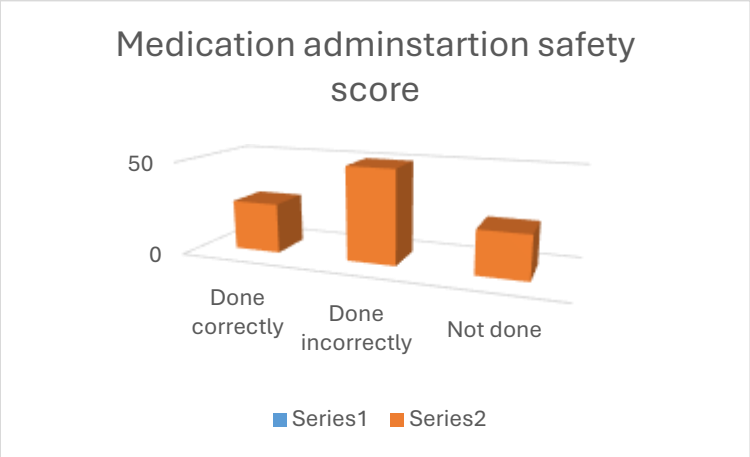

Figure 2 showed the Frequency distribution of Environmental safety score, only 23.3 donont practice environment safety measure , while the majority perform it wheather correctly or incorrectly.

Figure 2 Frequency distribution Environmental safety score

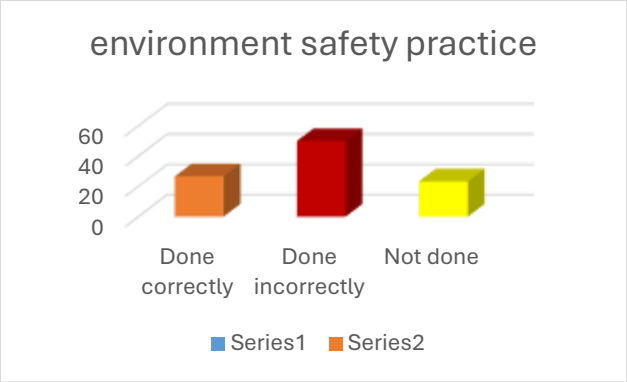

Table 3 points to statistically significant positive correlation between infection control competency, medication administration safety and environmental safety in studied hospital (p=0.001).

Table 3:Correlation between infection control competency, medication administration safety., Environmental Safety

	Infection control competency	Medication administration safety	Environmental safety
Infection control competency	1	R(p value) 0.829 (0.001*)	R(p value) ….0.788(0.001*)
Medication administration safety	R(p value) 0.829(0.001*)	1	R(p value) --- 0.837(0.001*)
Environmental safety	R(p value) 0.7880(.001*)	R(p value) 0.8370.001*)	1

Discussion

Nurses' professional development, workplace confidence, and patients' safe and satisfying experiences all depend on their ongoing competency assessments. Several distinct evaluation techniques should serve as the foundation for multidimensional approaches in nursing assessment. For safe practice, it should combine knowledge, critical thinking, empathy and communication, problem-solving, and introspection. Nursing competence assessments are crucial to the nurses because inadequate competency will cause disorder and disarray, increase casualties, and cause property losses. Health care institutions must deliver safe, effective healthcare, including public health care, (Fentianah, (2012; Zaitoun, (2024).

According to the results, two-thirds of nurses did not complete infection control measures, compared to only one-third of nurses. This finding showed that there was a significant difference in the total infection control competency score between the two hospitals. The lack of resources, the high patient volume, and the nurses' ignorance and training on the significance of infection control techniques can all be blamed for this outcome.

This was in line with Abo Al Wafa (2009) and Abo Shadi (2001), who claimed that the majority of nurses did not practice infection control techniques due to inadequate training, a lack of resources and supplies that hinder nurses' adherence to infection control precautions, and continuing education that keeps nurses abreast of new trends and factors that impact nursing competency toward infection control measures. Hegazy, & Tantawy, (2016; Osman, et al (2018).

Pittet (2021), who claimed that a large percentage of healthcare professionals implement infection control methods that are critical for employees, patients, and careers, did not agree with his findings. Constant reminders of the significance of infection control and the necessary steps to accomplish it should be given to them.

The results of the medication administration study showed that nurses were significantly more likely to perform medication administration safety competency tests wrong. Lack of training courses, a lack of competency assessments, and a disconnect between nursing practice and information that directly affects nursing abilities could all contribute to the findings. One possible explanation is that nurses may not be aware of medication administration safety measures. Along with the frustration and discontent brought on by the workload, the large number of patients, and the absence of monitoring, these factors all had a detrimental effect on the results of safe nursing practice and medication administration errors.

This was in line with Sakowski and Newman's (2008) recommendation that ongoing training, education, and assessment of nursing staff can help reduce medication errors. They also stated that new medications to the facility should receive high priority teaching and training, and that staff members should be knowledgeable about how the medication enters the body, as well as how to administer it, potential side effects, storage, and toxicity. Additionally, this supports Dozier's (2008) assertion that prescription errors are linked to increased workloads and a nursing shortage. As more patients are under a nurse's care, the nursing shortage has resulted in heavier workloads. Additionally, nurses do a variety of duties that need them to leave the patient's bedside.

Environmental safety measures are not implemented by nearly half of the study nurses. This outcome may be the consequence of nurses' ignorance of the significance of creating a safe atmosphere. Furthermore, this was in line with Dennis (2003–2004), who claimed that the majority of workers were unaware of the significance of maintaining a safe workplace and practicing self-discipline to prevent exposure to environmental hazards. They also needed to be aware of the work environment and that ongoing assessments were necessary to identify environmental hazards surrounding patients .

Additionally, this finding was consistent with Fentianah (2012), who claimed that two-thirds of staff nurses were unable to provide a secure environment for patients, guests, and employees and failed to take into account the significance of providing adequate, well-lit spaces and dry, clean floors for patients. Additionally, it was noted that almost two-thirds of the participating nurses had inadequate competency levels in environmental safety skills .

The findings showed a substantial positive link between the environmental safety competence core in hospital and infection control competency core with medicine administration safety, based on the correlation between the scores of the hospital under study. Additionally, this finding showed that the nursing staff in the hospitals had a poor level of competency, which might be caused by a variety of things, including a lack of continuous nursing competency assessments, a lack of programs for continuing education and training, and a lack of suitable policies, procedures, and protocols.

The nursing competency assessment is a constitutional mechanism that exists to provide a framework for tracking nurses' competence throughout their careers to ensure that they remain competent and up to date with the current nursing practice and guarantee nursing practice. In addition, ineffective nurse supervision and control, frustration and dissatisfaction stemming from workload, and finally a lack of resources, supplies, and motivation have an impact on the practice's safety. This is in line with the findings of Black, Allen, Redfern, Muzio, Rushowick et al. (2008), who claimed that identifying the needs for education and training as well as allocating adequate resources and supplies enable nurses to perform their jobs safely (Mrayyan, et al., (2023).

Conclusion:

This study found that the nursing staff in the studied hospital had a low competency level.In order to ensure safe nursing practice, it is crucial to determine the competency levels of nurses and integrate a structured nursing competency assessment that measures nursing competence in the nursing care delivery systems. Recommendations include creating licensure tests for nurses to practice, work-based orientation programs, and continuing education for nursing renewal.

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