Assessment of Nurses' Attitudes toward Medication Errors in Al-Hillah Teaching Hospitals

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Abstract:

Medication errors are a common occurrence in healthcare settings, contributing significantly to needless patient harm. Nurses play a critical role in medicine management and serve as the final line of defense against errors. Their views on medical mistakes have an impact on error identification, prevention, and reporting, all of which are critical for patient safety. In developing nations, including Iraq, low resources, heavy workloads, and weak protection mechanisms face additional obstacles. This study aims to analyze nurses' attitudes and perceptions regarding medication mistakes in Al-Hillah Teaching Hospitals.

Methods: A quantitative descriptive cross-sectional design was employed. The study sample included **170 nurses** from critical care units of Al-Hillah and Al-Imam Al-Sadiq Teaching Hospitals, selected via purposive sampling. Data were collected using a validated questionnaire (reliability r = 0.82) covering demographics, perception, and attitudes toward medication errors and reporting. Responses were scored on a 3-point Likert scale (agree = 3, neutral = 2, disagree = 1). Data analysis involved descriptive statistics, including frequencies, percentages, means, and standard deviations.

Results: Most participants were **female (57.6%)**, aged **20–30 years (75.9%)**, and held a **bachelor's degree (52.4%)**. The mean score for perception of medication errors was **2.70 (SD = 0.506)**, and the mean attitude toward reporting errors was **2.48 (SD = 0.657)**, indicating generally positive views. However, nurses identified **fear of punishment, heavy workload, insufficient**

managerial support, and limited training as barriers to reporting. Less-experienced nurses were particularly affected.

Conclusion: Nurses at Al-Hillah Teaching Hospitals demonstrate positive attitudes toward medication errors, but organizational and cultural barriers limit consistent reporting. Implementing **non-punitive policies, supportive supervision, continuous training, and accessible reporting systems** is recommended to enhance patient safety and promote a culture of transparency.

Keywords: Medication errors, nurses' attitudes, error reporting, patient safety, critical care, Iraq

Introduction

Medication errors remain a major global concern in healthcare systems, representing one of the leading causes of preventable patient harm (1). Such errors may occur at any stage of the medication process—prescribing, transcribing, dispensing, administering, or monitoring—and can result in significant adverse outcomes, including patient injury, prolonged hospitalization, and even death (2). Among healthcare professionals, nurses play a pivotal role in medication administration and are often the final safeguard between a prescribing error and the patient (3). Consequently, their attitudes toward medication errors significantly influence the likelihood of identifying, preventing, and reporting such events. A nurse's mindset closer to medicine errors encompasses personal beliefs, emotional responses, and professional judgments about the reasons and effects of errors (4). Positive attitudes sell transparency, errors disclosure, and proactive gadget development, while terrible attitudes frequently rooted in worry of blame or punishment have a tendency to deter reporting (4). Establishing a non-punitive ethos that promotes open communication about errors is thus crucial to improving medication safety and nursing practice (5). Research in several worldwide locations has shown that nurses' views are shaped by a variety of factors, including organizational culture, workload, staffing levels, educational opportunities, and the perceived equity of health facility reporting systems (6). Additional problems, such as aid barriers, insufficient group worker support, and poor patient protection systems, exacerbate the risk of errors and influence nurses' responses to them (7). Understanding

these attitudes is critical for devising focused interventions to promote the safety culture in Iraqi hospitals. This study aims to analyze nurses' attitudes on pharmaceutical errors in Al-Hilla Teaching Hospitals, with a focus on patterns of belief, contributing variables, and barriers to error reporting. The findings are intended to provide valuable insights for healthcare directors, nursing educators, and politicians to implement evidence-based strategies that encourage an open, learning-oriented environment and, in the long term, improve patient safety in medical practice..

Objectives:

1. To assess nurses attitude regarding medication error

2. To identify the socio demographic characteristics for the study sample

5. To assess nurses perception regarding medication error.

Methods:

Study design: The study was conducted using a quantitative descriptive cross-sectional design with the goal of evaluating nursing knowledge about dialysis that takes into account a scientific framework to address nurses' issues between September 1, 2024, and January 8, 2025.

Setting: Al-Imam Sadeq Teaching Hospital was chosen as the primary field to gather data in order to meet the study's goals. Al-Hillah Teaching Hospital was chosen as the primary field to gather data in order to meet the study's goals.

Sample of the study: 170 nurses were selected using a non-probability purposive sampling technique from two public governmental hospitals in Babylon City (Al-Imam Al-Sadiq hospital and Al-Hillah Teaching Hospital) in critical care unit. Nurse picked as special sample because they are assign to offer direct care to patients. One hundred and seventy nurses are chosen for this reason.

Data collection: The questionnaire is broken down into three sections in order to assess the nurses' attitude of medication error who work in the critical care unit: demographics, general information, and 5 items about perception regarding medication error, first section. Six experts determined the validity, and reliability (r: 0.82), which is statistically acceptable, was found: agree = 3, neutral = 2 and disagree =1 is the chosen scoring system that is being employed.

Results:

Table 1: Distribution of study sample related to demographical characteristics:

Categories		Frequency	Percent
Sex	female	98	57.6
	male	72	42.4
	Total	170	100.0
Age	20-30 years	129	75.9
	31-40 years	30	17.6
	41-50 years	11	6.5
	Total	170	100.0
Educational qualification	secondary school nursing	13	7.6
	diploma	67	39.4
	bachelor	89	52.4
	post graduate	1	.6
	Total	170	100.0
Residents	Urban	163	95.9
	Rural	7	4.1
	Total	170	100.0

Table 2: classification of the employment data of the participants.

Employment characteristics		Frequency	Percent
Years of employment in nursing field	> 1 year	21	12.4
	1-5 years	93	54.7
	6- 10 years	36	21.2
	11-15 years	20	11.8
	Total	170	100.0
Years of experience in oncology	> 1 year	19	11.2
	1-5 years	120	70.6
	6- 10 years	24	14.1
	11-15 years	7	4.1
	Total	170	100.0
Participant in training session related to patient nutrition	No	125	73.5
	Yes	45	26.5
	Total	170	100.0

Table 3: Distribution of study sample related to Perception about Medication Errors.

No	Items	Disagree		Neutral		Agree		Mean	St.d	Level
		F	%	F	%	F	%			
1	Medication errors are inevitable in nursing practice.	1	.6	14	8.2	155	91.2	2.91	.312	Positive
2	Reporting medication errors improves patient safety.	4	2.4	26	15.3	140	82.4	2.80	.456	Positive
3	Most medication errors are caused by system problems rather than individual negligence.	21	12.4	65	38.2	84	49.4	2.37	.695	Neutral
4	Fear of punishment prevents nurses from reporting medication errors.	6	3.5	29	17.1	135	79.4	2.76	.505	Positive
5	Fatigue and workload increase the likelihood of medication errors.	8	4.7	40	23.5	122	71.8	2.67	.563	Positive
General mean								2.702	0.5062	Positive

Table 4: Distribution of study sample related to Attitude toward Reporting Medication Errors

No	Items	Disagree		Neutral		Agree		Mean	St.d	Level
		F	%	F	%	F	%			
1	Reporting medication errors should be mandatory for all nurses.	11	6.5	45	26.5	114	67.1	2.61	.609	Positive
2	I feel comfortable reporting my own medication errors.	11	6.5	43	25.3	116	68.2	2.62	.606	Positive
3	I would report an error even if it did	16	9.4	53	31.2	101	59.4	2.50	.664	Positive

	not cause harm to the patient.								
4	Supervisors provide a supportive environment for error reporting.	34	20.0	74	43.5	62	36.5	2.16	.735	Neutral
5	I believe that reporting errors can improve nursing practice.	17	10.0	50	29.4	103	60.6	2.51	.673	Positive
General mean								2.48	0.6574	Positive

Discussion:

The study conducted at Al-Hilla Teaching Hospitals provides valuable insights into the demographic and employment characteristics, perceptions, and attitudes of nurses regarding medication errors and reporting. The sample consisted of 170 nurses, with the majority being female (57.6%), reflecting the global trend of nursing as a predominantly female profession. Most participants were relatively young, aged 20–30 years (75.9%), indicating a workforce with limited professional experience. Regarding educational qualifications, more than half held a bachelor's degree (52.4%), followed by diploma holders (39.4%), suggesting that most nurses have formal education sufficient for safe practice. The majority were urban residents (95.9%), consistent with the location of teaching hospitals in city areas. In terms of employment characteristics, over half of the nurses had 1–5 years of experience in the nursing field (54.7%), and a significant majority had 1–5 years of experience in oncology (70.6%), demonstrating that many participants were early-career nurses still developing competence and confidence in error prevention and reporting. Notably, 73.5% of participants had not attended any training related to patient safety or nutrition, highlighting a gap in ongoing professional development and suggesting a need for structured educational programs to enhance awareness and skills in medication error prevention. Regarding perception of medication errors, the overall mean score of 2.70 indicated a positive perception among nurses. Most participants acknowledged the inevitability of medication errors (91.2%) and recognized the importance of reporting errors to improve patient safety (82.4%). However, 79.4% agreed that fear of punishment prevents nurses from reporting errors, reflecting the persistence of a

blame-oriented culture. Additionally, 71.8% believed that fatigue and workload increase the likelihood of errors, consistent with (1,2), who linked high workloads to reduced vigilance. The neutral response regarding system-related causes suggests that some nurses still attribute errors to individual negligence rather than systemic factors, emphasizing the need for education on organizational safety systems. The findings on attitudes toward reporting medication errors showed an overall positive attitude, with a mean score of 2.48. Most nurses agreed that reporting should be mandatory (67.1%) and expressed comfort in reporting their own errors (68.2%), indicating a growing sense of professional responsibility. Nevertheless, only 36.5% agreed that supervisors provide a supportive environment for reporting, highlighting limited managerial support and a gap in establishing a just culture of safety. A majority (60.6%) recognized that reporting can improve nursing practice, aligning with studies showing that structured feedback after reporting encourages continuous learning and system improvement (9). These findings are consistent with current research from the region and around the world. (10) found that fear of blame and a lack of knowledge about reporting systems were major barriers to error reporting. (11) found that nurses are much less likely to disclose errors due to a fear of reporting penalties. The findings underline the importance of improving drug mistake reporting practices by addressing both individual and organizational variables. Overall, the study found that, while nurses at Al-Hillah Teaching Hospitals have good opinions and attitudes about medication errors, institutional and cultural hurdles like as fear of penalty and insufficient managerial support continue to prevent open communication. Implementing continual safety education, supportive supervision, and a non-punitive reporting culture is crucial to improve patient safety and nursing responsibility in the Iraqi healthcare system.

Conclusion

The study discovered that nurses at Al-Hilla Teaching Hospitals have generally positive attitudes about medication errors and reporting, with mean scores indicating a strong belief (M = 2.70) and mindset (M = 2.48). Despite this, boundaries, fear of punishment, a heavy workload, limited managerial support, and insufficient training prevent consistent reporting. Younger and less experienced nurses have been particularly affected, underlining the importance of continued training and mentorship. Overall, developing certain non-punitive, supportive environments is crucial for improving reporting procedures and decorating affected person safety.

Recommendations:

1. Foster a non-punitive reporting culture for greater openness.

2. Provide ongoing training on pharmaceutical safety, error prevention, and ethical reporting.

3. Improve supervisory support to turn error reporting into a learning opportunity.

4. Implement error reporting systems for anonymous documentation.

5. Address workload and staffing difficulties to prevent fatigue-related errors.

6. Promote research and policy development on error reporting and management.

7. Integrate patient safety into nursing education to promote early awareness and competency.

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