



Knowledge, Attitude, and Practice Regarding Medication Error Reporting among Nurses

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ABSTRACT

Medication errors are a hazardous and multifaceted concern in medical practice, particularly in critical care areas where patients can undergo hypothetically severe complications on account of the intensity of their sickness. National Health Service (NHS) has reported that the mortality rate caused by medication errors is as high as 12,000 patients losing their lives each year and this alarming issue can cost a supplementary £0.75 billion–£1.5 billion in healthcare costs. The study aimed to assess the knowledge, attitude, and practice among nurses regarding reporting medication errors. A quantitative descriptive study was conducted to assess the knowledge, attitude, and practice regarding medication error reporting among nurses at a public sector tertiary care hospital in Lahore. A simple random sampling method was used to select the 133 nurses to collect the data. After taking the informed consent, a self-administered questionnaire was distributed to the participants and they were requested to answer all the questions in the form and return it back upon completion. Most of the nurses (68%) had good knowledge regarding medication errors and their reporting, 48% of the subjects displayed a positive attitude towards the problem and 65% of the nurses were willing to report the medication errors as it concerns the patient safety. In conclusion to the findings of this study, it was observed that although most of the nurses possess good knowledge, positive attitude, and good practice regarding medication error reporting, there is a dire need for continued education as the issue is directly linked to patient safety.

Keywords: uninterrupted care, clinical practice, role description, self-administered, novice.

1. Introduction

Medication errors are a hazardous and multifaceted concern in medical practice, particularly in critical care areas where patients can undergo hypothetically severe complications on account of the intensity of their sickness (Escrivá Gracia, Serrano & Garrido, 2019). Medication errors can happen throughout the medication handling procedure encompassing prescription, transcription, dispensing, administration, and monitoring, and such errors contribute to approximately 25% of all medical errors (Manias, Kusljic & Wu, 2020). Findings from recent studies by the National Health Service (NHS) has reported that the mortality rate caused by medication errors is as high as 12,000 patients losing their lives each year and this alarming issue can cost a supplementary £0.75 billion–£1.5 billion in healthcare costs (Sutherland et al., 2020). The occurrence of medication errors can be attributed to the physical distress of nurses due to long-term acquaintances to challenging situations at work and daily life (Dall’Ora, Ball, Reinius & Griffiths, 2020). Nurses working in critical care areas often have higher exposure to mental discomforts and deprived health compared to nurses working in medical and surgical units, leading to more incidences of medication errors. It is not known, however, how critical care nurses’ overall health affects the occurrence of medical errors (Melnik et al, 2020). Reporting medication errors is an important behavioral trait for nurses in order to achieve the target of ensuring the safety of patients and the provision of high-quality care (Levine, Carmody & Silk, 2020). Taking accountability and speaking up about medication errors can be utilized as an instrument for the pursuit of acquiring knowledge, that can encourage a safe clinical environment. Safety reporting systems (SRS) are employed by many healthcare settings universally, to echo the events that are considered to impact the safety of patients (Alsulami et al, 2019). Patrons from the health industry and governmental institutions are trying to use the help of artificial intelligence (AI) to deal with (1) the high incidence of preventable medical errors, (2) poor efficiency of staff, and (3) operational inadequacies related to the provision of the quality care to patients but have not found many appreciations so far (Sounderajah et al, 2020).

The study aimed to assess the knowledge, attitude, and practice among nurses regarding reporting medication errors.

2. Methodology

Research design: A quantitative descriptive study was conducted to assess the knowledge, attitude, and practice regarding medication error reporting among nurses.

Research Setting: This study was performed at a public sector tertiary care hospital in Lahore, Pakistan.

Study Population: The Population targeted by the study were nurses working in different specialties in healthcare settings.

Sampling method: A simple random sampling method was used to select the sampling units from the sampling frame.

Sample size: The sampling frame comprised 312 nurses (total nurses working in the hospital) and out of these 133 nurses were selected in the sample.

Research Instrument: A close-ended structured questionnaire consisting the questions to assess knowledge, attitude, and practice regarding medication error was used to collect the data.

Data Collection: After documenting the informed consent, participants were interviewed through a self-administered questionnaire.

Data Analysis: The measured responses were analyzed for descriptive statistics; frequency and percentages were calculated.

3. Results

After selecting the 133 nurses through a simple random sampling method, they were interviewed using a self-administered questionnaire. The questionnaire had 4 parts comprising of questions related to; 1) demographic variables 2) knowledge 3) attitude and 4) practice regarding reporting of medication errors among nurses. Of all the participants, 90% of them were females, 54% were between the age group of 31-35 years and 49% had work experience ranging from 6 -10 years. Table 1 below showcases the demographic variables of the participants.

Table 1. Demographic characteristics of participants

		Frequency	Percentage
Gender	Male	13	10%
	Female	120	90%
Age	20 - 25	16	16%
	26 - 30	30	30%
	31 - 35	54	54%
	36 - 40	33	33%
Work Experience	0 to 5 years	25	25%
	6 to 10 years	49	49%
	11 to 15 years	35	35%
	16 years	23	23%

Participants' responses were recorded and classified into three categories; 1) knowledge, 2 attitude, and 3) practice. Answering items related to knowledge, 33% of nurses agreed and 35% of nurses strongly agreed. Their responses were summed up and it was calculated that 68% of the nurses possessed good knowledge and 22% of nurses remained neutral while answering the questions related to reporting of medication errors. Table 2 below lists the detailed responses of nurses illustrating their knowledge regarding reporting medication errors.

Table 2: Knowledge of participants regarding medication error reporting

No.	Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Knowledge related items	1 I have good knowledge of medication errors & reporting procedure	-	-	1%	25%	74%
	2 Medication errors mostly occur when nurses are facing work overload	2%	2%	17%	34%	45%
	3 Improper prescription leads to medication errors	6%	11%	23%	36%	25%
	4 Lack of knowledge about the drug preparation procedures, dose calculation, and rate of administration leads to medication errors	-	9%	39%	40%	12%
	5 Complex design of equipment results in medication error?	-	9%	21%	29%	17%
	Total	2%	7%	22%	34%	35%

While assessing the attitude of nurses about reporting medication errors, it was measured that 48% of the participants showed a positive attitude and 36% of the subjects responded in a neutral way to the items in the questionnaire regarding their attitude towards reporting medication errors. Table 3 below entails the percentage of nurses' responses to the items designed for assessing their attitude regarding reporting medication errors.

Table 3. Attitude of participants regarding medication error reporting.

	No.	Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Attitude related items	1	It's my responsibility to report all forms of medication errors	11%	12%	33%	36%	8%
	2	I think it will have a negative impact on patients if I report any medication errors	2%	11%	34%	30%	24%
	3	It's my responsibility to report all forms of medication errors	11%	12%	33%	36%	8%
	4	I think it will have a negative impact on patients if I report any medication errors	2%	11%	34%	30%	24%
	5	Nurses might not think the error is vital enough to be reported.	1%	25%	41%	34%	-
	6	I think only those medication errors resulting in serious consequences should be reported	-	17%	38%	38%	8%
	Total		4%	14%	36%	34%	12%

The questionnaire consisted 6 items to determine the practice of nurses regarding medication error reporting and the results were quite promising as 65% of the subjects reflected a positive practice through their responses, 21% of them remained neutral, and responses of 14% of nurses indicated the need of immediate interventions to improve their practice. Table 4 below shows the percentage of subjects' answers to items related to practice regarding medication error reporting.

Table 4. Practice of participants regarding medication error reporting.

	Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
Practice related items	1	My organization has a policy to train new staff nurses regarding medication errors.	1%	5%	16%	48%	30%
	2	I think nurses fail to adhere to the organization's policies or guidelines in reporting medication errors.	8%	3%	16%	29%	45%
	3	I think frequent interruptions and distractions are the source of hindrance in reporting medication errors.	-	15%	25%	41%	20%
	4	Performing root cause analysis will reduce the replication of deadly medication errors at the hospital.	5%	7%	32%	33%	23%
	5	Avoid unnecessary conversations with colleagues or patients during drug administration can reduce medication error	4%	27%	23%	32%	14%
	6	Nurses responsibility to educate omission of drugs without acceptable clinical reason	-	8%	21%	38%	34%
	Total	3%	11%	21%	37%	28%	

4. Conclusion

In conclusion to the findings of this study, it was observed that although most of the nurses possess good knowledge, positive attitude, and good practice regarding medication error reporting, there is a dire need for continued education as the issue is directly linked to patient safety. Every nurse must take accountability for her actions and deal with the situation confidently and deliberately. Healthcare organizations must enforce a strict and vigilant policy to address the issue and perform a root cause analysis of the situation to ensure patient safety and the provision of quality care to the patients.

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