

KNOWLEDGE, ATTITUDES AND PRACTICE OF NURSES REGARDING MEDICATION ERROR REPORTING IN KSA

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Background

Errors in medication administration are among the most underreported medical mistakes, and this raises alarm bells all around the world. "any avoidable incident that might lead to an incorrect pharmaceutical usage that has the potential of causing damage to the patient" can be regarded as a medication mistake [1-6]. Despite the fact that drugs can be beneficial, they can also be harmful if misused. Several causes, including a lack of performance, a lack of information, slips, and lapses, may be to blame for the harm caused by prescription usage. Mistakes in medication administration can have a significant impact on a patient's health care costs and quality of life, as well as on the health care providers who care for them. It's important to improve knowledge about pharmaceutical mistakes and their repercussions in order to decrease them [7, 8].

Medical mistakes can occur at any point in the process of prescribing or administering a patient's medicine at a hospital. In the Kingdom of Saudi Arabia, prescribing mistakes account for roughly one-fifth of all drug errors in primary care settings (KSA) [1, 9-12]. But the percentage of mistakes that occur at each level is variable [13].

Nurses have an important role in the safe administration of medications, which includes, but is not limited to, raising awareness of the risks associated with the possibility for medication mistakes. Patient and medication assessment is carried out by nurses, who utilize their expertise and clinical reasoning to ensure that medicine is administered safely [14].

Numerous hospitals across the world have adopted safety reporting systems (SRS) to document occurrences that may jeopardize patient safety [15]. The system consists of an incident description followed by extensive clinical and patient information. Active learning and better health approaches decrease the rate of unfavorable occurrences, hence eliminating similar errors from occurring in the future. The health care practitioner must understand that drug mistake reporting is not an employer's fault, but rather a systemic failure. When a multidisciplinary approach to healthcare systems is used, errors are rarely the responsibility of a single individual [16]. Despite greater reporting of pharmaceutical mistakes, analysts claim that medication errors remain underreported in practical terms [13, 17, 18]. This study is determined for estimating the level of KAP of nurses towards drug errors reporting.

Methods:

Study design and sample:

A cross-sectional study done between June and September 2019 utilizing a self-administered questionnaire issued to nurses.

Study population:

Our main target population included nurses who worked in pediatric, internal medicine, surgery, family medicine and ob / gyn. Nurses associated with patient safety and dentistry were excluded.

Study tools and data collection:

The co-investigators designed the questionnaire, which was founded on comprehensive literature studies [1, 19]. Nurses were given a hard copy of the questionnaire. The questionnaire contained four sections: demographic information about the respondent's age, gender, nationality, department, and years of specialty experience; knowledge of medication error reporting; attitudes toward medication error reportage; and practice pattern of medication administration errors reporting.

The parts on knowledge and attitudes were graded on a 5-point Likert scale ranging from 'strongly disagree' to 'strongly agree'. The replies of participants were totaled, and the mean scores for each participant were determined. For knowledge and attitudes, nurses with a mean score of 4 or above were judged to have adequate/favorable knowledge/attitude outcomes, while those with a mean score of less than 4 were regarded to have insufficient/unfavorable knowledge/attitude outcomes. The portion on drug mistake reporting was examined by asking five questions about their experience with reporting over their professions.

Ethical approval:

The study gained Institutional Review Board (IRB) permission for the project. All research respondents gave informed consent. The study preserved confidentiality of the participants through the study since no personally identifiable information was acquired.

Statistical analysis:

IBM SPSS software for Windows version 21.0 was used to gather and analyze all data. P-values less than 0.05 were statistically significant.

Results:

Demographics of the studied subjects:

The demographics and work experience of the included nurses were presented in Table. 1.

Table (1): Demographics of included nurses:

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n±SD		±3.018

Knowledge score of the nurses:

The greatest number of nurses agreed and strongly agreed that they would report medication errors including reporting inadequate dose, prevention of medication to the patient, and doesn't receive a medication as prescribed. Also, the majority showed that they have good knowledge regarding when to report a medication error. The total knowledge score was high among half of the nurses and average among 31% of them showing high total knowledge score. positive attitude toward respecting the rights of the patients at any department of the hospital including justice, fairness, care, attention, respect, elimination of uncomfortable and noisy factors, safe environment, no racism, visiting times, companion, ability to use complaints and lawsuits, change health institutions, emergency medical interventions, proper information, Nursery education, adequate and qualified services.

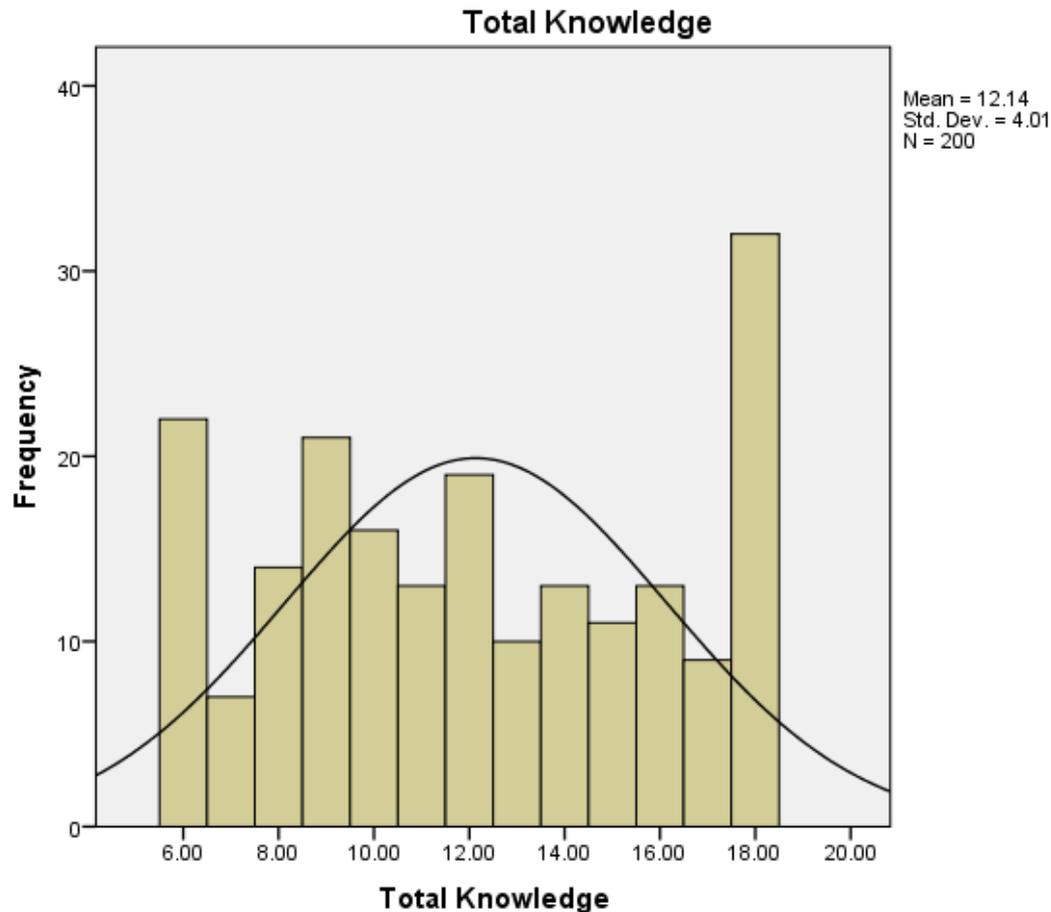


Fig. 1: Total knowledge of the nurses

Attitude score and practice score:

About 45% of interviewees agreed on the critical nature of reporting mistakes, even if they did not affect the patient and 77% of them agreed that when reporting medication errors, they should keep the data confidential. Some responders (47 percent) indicated that they would rather educate people who created medication errors than report them. Around 69.4% of nurses agreed that they would not hesitate to report a medication error, whereas 47 percent expressed that it's not their responsibility to report a drug error caused by someone else. The level of attitude was high among the majority (41%) and average among 37% (Table. 4&5, Fig. 2).

The practice pattern showed a low level of reporting pattern as 96% of respondents were aware of how to report a drug mistake. More than half (59 percent) of individuals reported no prescription mistakes during their employment while 32% reported one to four medication mistakes, 7% percent reported five to ten medication errors, and 2 percent reported more than ten prescription errors. When questioned about the impact of the SRS on the frequency of medication mistakes, the majority of nurses (64 percent) indicated a lack of information, while only 28% indicated a decrease in the number of errors. Less than half of participants (46%) agreed to report their coworkers if they produced a single medicine error, 27% if they repeated the problem, 15% never reported a colleague, 12 percent agreed to report if they made more than 3 errors.

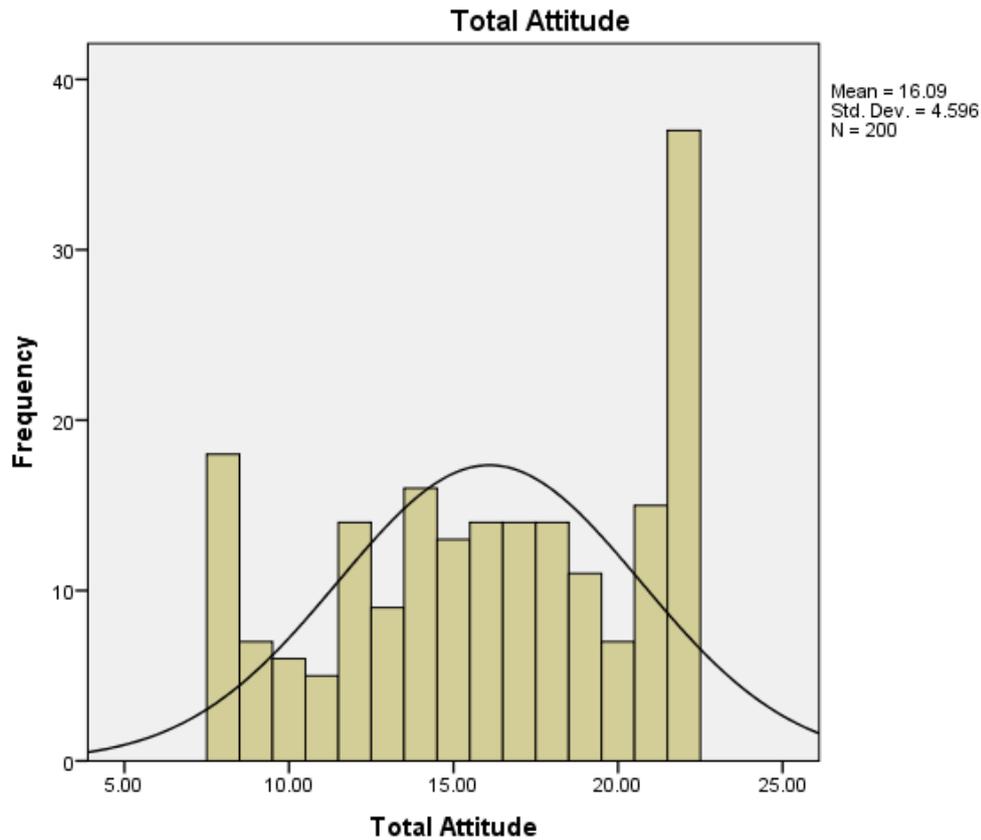


Fig. 2: attitude level among nurses

The higher the knowledge, the higher the attitude score showing a positive significant relation between knowledge and attitude (Fig.3). As for the correlation between knowledge, attitude with nurses' demographics, only the higher years of experience showed significant effect on the higher level of knowledge and attitude (Table. 6).

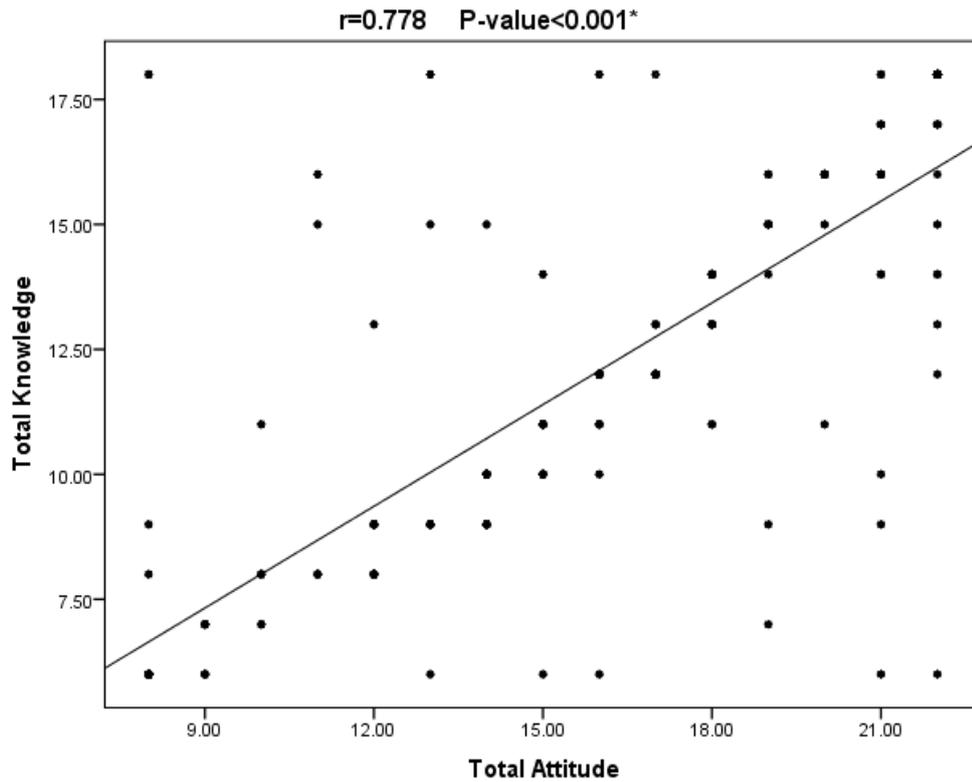


Fig. 3: correlation between knowledge and attitude

Table (6): Relation between different studied basic demographic data and knowledge, attitude score.

		Knowledge	Attitude
Knowledge			
Knowledge	University		
	Graduate		
Knowledge	Primary		
	Intermediate		
	Parents		
Knowledge	Parents		
	Parents		
Knowledge		*	*

Discussion

Nurses use their fundamental understanding of patient conditions and organizational procedures to apply clinical reasoning to ensure that medications are administered safely to their patients. Clinical reasoning employed by nurses to support pharmaceutical safety was only partially articulated, and there was little evidence to support this claim [5, 14].

The participants' understanding of medication mistake reporting was satisfactory, and they agreed with the assertion that reporting drug errors is everyone's duty. Our survey participants agreed that reporting medication mistakes occurred as a result of medicine not being delivered, medication being administered that was not prescribed, or medication not being received as recommended. Conversely, it was shown that individuals had a common

propensity to withhold reporting if they got an insufficient amount of the prescribed drug [20]. This was in the same respect with a Saudi study conducted at Riyadh showing that nurses have high tendency to report errors regardless the type of error or the severity of disease [1]. In this study, gender, age and department had no effect on knowledge and attitude and only the higher the level of experience was associated with higher knowledge and attitude scores [20].

The level of practice was low to average among most of the nurses which is according with other studies showing higher levels of underreporting of medication errors [21, 22] while it was in contrast with the Saudi study which showed higher levels of medication reporting practices [1].

This study is one of the least studies conducted among nurses in KSA to study their KAP toward medication errors reporting. There are certain limitations to this survey because it is based on a questionnaire. There may have been issues with recollection bias, response bias, and communication hurdles between the researchers and participants, which may have resulted in inaccurate results. Study findings cannot be applied to all nurses because the study was done at only 5 health care institution and involved 303 nurses.

Additional centers and more participants can be included in future studies to examine the obstacles to under-reporting of medication mistakes despite having enough information and an optimistic attitude.

Conclusion:

High level of knowledge and attitude regarding reporting drug errors was shown in the present study however the level of practice is still lower than the worldwide data. Human error and mistakes are unavoidable, but patient safety must always be a top concern for healthcare personnel. Despite the prevalence of pharmaceutical mistakes in clinical practice, they are often thought to be underestimated. However, strengthening error reporting together with strong regulations, and sufficient training of health care personnel, could enhance the reporting process and subsequently improves the treatment offered to patients. Therefore, we urge that all health care practitioners be required to take mandatory drug safety training and that error detecting alarms and software should be used to reduce the risk of mistakes.

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