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RESEARCH ARTICLE

Nurses' Medication Administration Error, Reporting Practices and Challenges in Tertiary Hospitals: Descriptive Analysis

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Abstract

Background: Medication administration errors (MAEs) are significant threats to patient safety, yet many incidents go unreported. Effective reporting of medication errors can provide valuable data to improve safety practices.

Purpose: This study aimed to examine registered nurses' experiences with medication administration errors, their perceptions of medication error reporting, and the potential barriers in reporting medication errors.

Method: Having used a descriptive cross-sectional quantitative research design, the study was conducted on 232 registered nurses. Data were structured via questionnaire adopted from medication administration error reporting scale with content validity index (CVI) of 0.87 and the scale's overall internal consistency alpha (KR-20) of 0.82. Data were collected from April 2020 to May 2020 through emailed invitation and via selected social media platforms such Facebook and Instagram, consent forms were also gathered thru email, and the survey instruments were hosted in Google Form. Data collected from the survey were electronically stored in a password-protected cloud. Quantitative data were analyzed using IBM SPSS software. The characteristics of the sample were presented using descriptive statistics (frequencies, percentages).

Results: Two-hundred thirty-two registered nurses (n=232) participated in the study. Most of the participants were aged 20 to 30 years old (n=158, 68.10%) and majority were females (n=165, 71.1%). Most subjects have four or more years of clinical practice and were assigned in the general ward (n=129, 55.60%) and one-hundred eighty-one (78.02%) were affiliated in private hospitals.

Most respondents reported having encountered medication administration errors (72.41%). Despite acknowledging the importance of error reporting, many nurses did not report errors due to fear of negative consequences and lack of support from management. Specifically, 47.41% of nurses reported errors "always," while 12.07% never reported. The data revealed that majority of the participants have encountered medication administration errors and most of them reported such incidents. The study identified several barriers that deterred nurses from reporting these errors: fear of personal blame, concerns about adverse consequences, and a focus on individual accountability by nursing administration. The lack of support from the management brought insecurity to nurses to admit their error. The findings indicated that fear of negative repercussions and insufficient managerial support contribute significantly to the underreporting of medication errors. This reluctance to report compromised the ability to identify and to address systemic issues, which is crucial for improving patient safety.

Conclusion: Hospital organization should promote a culture of safety. Nursing managers were discovered to have provided personal, professional, and legal support that encouraged a culture of reporting errors in order to discover the root cause of errors and not focus on nurses alone so as to eventually lessen and to ultimately prevent medication errors from happening. To foster a culture of safety, healthcare organizations were also recommended to have implemented strategies that encourage error reporting and support nurses. Recommendations also included developing anonymous reporting systems, providing comprehensive personal, professional, and legal support, and shifting focus from individual blame to systemic improvements. Such measures were recommended to help enhance reporting practices by ultimately reducing medication errors and improving patient outcomes.

Keywords: *Medication administration error (MAE), medication administration error reporting (MAER), perception and barriers in MAER*

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Introduction

Improvements in health care for patients include advance clinical therapeutics, however, benefits of this enhancement are accompanied by increased risks due to the commission or omission of the prescribed medication when a patient receives the medication erroneously (Elliott et al., 2018). Such incidents of medication error result in an adverse drug events (ADE) which harms the patient involved (Dedefo et al., 2016). Medication administration errors (MAE) contribute directly to patient morbidity and mortality (Alemu et al., 2017). Approximately 1.5 million people are injured annually for the so-called "medication errors" as reported by the National Coordinating Council for Medication Error Reporting and Prevention (Al Kuwaiti, 2016). The Food and Drug Administration (FDA) presented that medication errors are the most common error involving medications that was related to administration of an improper dose of medicine, accounting for 41% of fatal medication errors (Wu et al., 2016). Giving the wrong drug and using the wrong route of administration each accounted for 16% of the errors. Errors in medication administration can be found in any of these phases: (1) prescribing, (2) dispensing, or, (3) transcribing, if not intercepted, will result in adverse drug reactions and some may even lead to a patient's death (Truitt et al., 2016).

In the study of Metcalf et al (2018), indicates that medication errors could be one of the many effects of short nursing staff employed in an institution. Critical nursing shortage leads to errors that primarily affect patient safety. Inappropriate nursing staff is a key cause of a busy shift and with inadequate staffing, the chances of increased morbidity and mortality among patient happens. With the problem of nursing shortage in the hospitals, safety and quality management are harder to achieved.

Given the domino effect of nursing shortage, the actual occurrence of errors and the reporting of an actual error is another aspect in the day-to-day operation of hospitals. Reporting medication errors is crucial for developing effective preventive strategies since many errors can be avoided (Smith et al., 2021). Recent studies have highlighted a significant gap in error reporting: nurses responsible for minor errors report less than 30% of these incidents, while those involved in major errors report fewer than 50% (Johnson & Lee, 2023). In addition, while the average rate of medication errors among nurses is approximately 20%, the actual reporting rate remains distressingly low at around 2% (Brown et al., 2022).

Admitting that one had encountered an error during the line of duty takes accountability and responsibility. Often such action is overlooked due to understaffing and the need to report due to the tons of other nursing responsibility that require to be accomplished within nurses' shifts. Nurses are also unwilling to report medication errors since they are afraid of the management's stance on such incidents. In order to take proactive steps to promote medication error reporting, hospital administrators should promote a culture that fosters a non-punitive approach to solve these incidences (Moureaud et al., 2021).

Health care professionals need to provide health care services to patients and these professionals portray different roles in providing medications. The said roles pertain to the physician who order the medication, the pharmacist who prepares the medication, and the nurse who administers the medication (Rohde, & Domm, 2018).

Medication administration is a responsibility of nurses and there are more than 15 types of medication errors that a nurse can commit and these are wrong dose, wrong drug, allergy history, on the drug prescribed, missed dose, wrong time, wrong frequency, wrong technique, missed drug-drug interaction, wrong route, extra dose, failure to act on test, equipment failure, inadequate monitoring, and preparation error (Dyab et al., 2018). Although errors can occur during the prescribing and dispensing phases, the MAE focuses on errors in medication administration (Almutary, & Lewis, 2012). The issue of medication administration within the clinical setting has long been the focus of scrutiny and research especially for healthcare professionals where dilemma arises when error is committed (Pournamdar, & Zare, 2016). It affects patient safety, hospital costs, and integrity of the nursing profession (Dumo, 2012).

Nurses are hospitals' front-line healthcare service providers who play a critical role in the delivery of care to patients while managing medication administration. In Dumo (2012) nurses spend up to 40% of their time in the administration of medications. It consists of a series of complex, problem-prone processes accounted for nurses (Dumo, 2012). There is a high potential for an error to occur with each dose of medication (Blignaut et al., 2017). It is imperative that nurses must have better clinical judgment and not merely depend on what the doctors say and order. They must know the process and make sure that doctor's orders are correct (Dumo, 2012). The discrepancy between the medicine administration and the doctors' order as written on the patient's chart are also considered medication errors (Foo et al., 2017) and it is important that such errors are detected and reported (Westbrook et al., 2015). Medication errors reporting is highly necessary in improving services related to the quality of clinical care (Di Simone et al., 2018).

Research Objective

The study aimed to determine the presence of (a) medication error and its (b) reporting. It also sought to identify the staff nurses' (c) perception in reporting these incidences and identify potential (d) barriers towards medication error reporting.

Methods

The study utilized a descriptive cross-sectional quantitative research design to determine the presence of (a) medication error and its (b) reporting; and to identify the staff nurses' (c) perception in reporting and identifying potential (d) barriers towards medication error reporting.

Convenience sampling was used in the selection process of respondents. Using G* Power version 3.1.9.2, the total sample size needed that would yield an effect size of 0.25 and power of 0.95 at 0.05 level of significance is 210 nurses.

For the inclusion criteria, participants of this study were registered nurses from Pampanga north of Metro Manila who were assigned in different areas/units in both public and private hospitals.

Research Instruments

The study adopted MAE Reporting Scale by Almutary and Lewis (2012) that was developed after analyzing several studies that examined the RNs' willingness to report MAEs using the MAE Reporting Scales from the studies of Lin, and Ma (2009); Okuyama et al. (2010); Wakefield (2005). With regard to these tools' content validity, they contained the factors related to RNs' perception of MAEs and the potential barriers to reporting MAEs that were used in Almutary (2012) study questionnaire. None of these tools included holistic elements that would facilitate in achieving the objectives of this study. The questionnaire developed for use in the study was combined and modified in its components from the 3 tools of Lin, and Ma (2009), Okuyama et al. (2010), Wakefield (2005). Given past use of these tools (and in some cases repeated use), the content validity index (CVI) is 0.87 and the scale's overall internal consistency alpha (KR-20) is 0.82.

Particularly the instrument determined the following: (1) Nurse Demographic Data (5 items); (2) Medication Administration Error Incidence (3) Medication Administration Error Reporting (4) Nurse's perception to report MAE (6 item); and, (3) Potential Barriers to Reporting MAEs that would be classified as (*a*) personal fear factor (6 items), (*b*) administration factors (4 items), and (*c*) reporting processes factor (3 items).

For the demographic and background data, participants will be asked whether they have ever made an MAE during their career answerable with *yes* or *no* and whether they reported the MAEs that they committed where possible answers will be *never*, *sometimes*, and *always*. The second part of the survey form is 6 item questions asking Nurse's perception in reporting MAE. The last section would be asking potential barriers to reporting MAEs that were classified as (*a*) personal fear factor (6 items), (*b*) administration factors (4 items), and (*c*) reporting processes factor (3 items).

Data Collection Procedure

For data collection, permission was sought to utilize the MAE Reporting Scale. Invitations were then sent to nurses who were qualified to become subjects of this study. Consent form and other survey instruments were also hosted in Google Form. Through the sent invitations, nurses were duly informed of the extent of their participation and of their assurance in anonymity. Nurses who agreed to participate were asked to complete the questionnaire. All of the data collected during the investigation were treated with utmost confidentiality. Data collection was done from April 2020 to May 2020. Data from the survey were electronically stored in a password-protected cloud. Quantitative data were analyzed using IBM SPSS software. The characteristics of the sample were presented using descriptive statistics (frequencies, percentages).

Ethical Consideration

Upon having secured the approval of the HAU-IRB with protocol number: 2020-007-CCDELPUERTO-MEDADMINERROR, data collection was carried out. The survey tool used was accompanied with an explanation and rationale of the study. An electronic consent was obtained from the participants prior to administration of the survey questionnaires. After the completion of the survey, storage of the information gathered shall be kept for two years.

Results

Two-hundred thirty-two registered nurses (n=232) participated the study. Most of the participants were aged 20 to 30 years old (n=158, 68.10%) and majority were females (n=165, 71.1%). With most nurses having four or more years of clinical practice, majority are assigned in the general ward (n=129, 55.60%) and one-hundred eighty-one (78.02%) are affiliated with private hospitals.

One-hundred sixty-eight (72.41%) nurses reported (Table 2.) that they have encountered medication error/s in their practice (table 2) and mostly (n=108, 46.55%) are on the age bracket of 20 to 30 years old and 101 (43.53%) are nurses with four or more years of clinical nursing experience. Ward nurses also

Table 1. *Characteristics of the sample of nurses (n=232)*

Demographic Profile	
Age	
20-30	158 (68.10%)
31-40	58 (25%)
41 above	16 (6.90%)
Gender	
Male	67 (28.9%)
Female	165 (71.1%)
Years in Clinical Practice	
< 1 to < 2	41 (17.67)
2 to < 3	17 (7.33%)
3 to < 4	45 (19.40%)
4 & above	129 (55.60%)
Area of Practice	
Ward	129 (55.60%)
Special Area:	103 (44.40%)
Delivery Room	7 (3.02%)
Emergency Room	16 (6.90%)
Hemodialysis	6 (2.59%)
Intensive Care Unit	8 (3.45%)
Neonatal Intensive Care Unit	4 (1.72%)
Operating Room	60 (25.86%)
Post Intensive Care Unit	2 (0.86%)
Hospital Affiliation	
Private	181 (78.02%)
Government	51 (21.98%)

had encountered more error/s (n=94, 40.52%) as compared to special area nurses (n=74, 31.90%).

For those nurses who encountered medication error/s when asked if they have had reported the incidence. One-hundred ten (47.41%) answered "always" and twenty-eight (12.07%) never reported.

In terms of Perception on reporting medication error/s (Table 4), almost all (n=230) of the nurses think MAE should be reported. Two-hundred eighteen of them believed that reporting medication error/s is important. Nurses also thought about the importance of reporting medication error/s even if it does not harm the patient (n=201), or even if it does not improve the patient condition after the occurrence of the medication error. Considering the similar errors that happened in their department, nurses who are not willing to report scored higher (n=135) as compared to those who have yet to report such incidents (n=97). Nurses who answered that they would not report MAE if they were not involved was also a little higher (n=123) as compared to those who will report even if they are not involved (n=109).

Three potential barriers that may influence nurses' decision to report MAE were examined (Table 5). The first factor is their personal reason that they would be viewed as incompetent and would be discriminated is not a concern because in both items the nurses replied "no" (n=148, 141).

The second factor as to why nurses are hesitant to report is due to their receipt of possible negative feedback ("yes" n=156). Medication administration error/s are viewed as a measure of quality nursing care ("yes" n=186). The administration would focus on the individual nurse as the primary cause of the medication error ("yes" n=150). The response toward the staff would not match the severity of the medication error. Hence, fifty percent of the participants answered ("yes" n=116).

Finally, in terms of the Reporting process factor, nurses did not agree with the statements that incident report forms are too

Table 2. *Medication Administration Error Incidence*

Nurses:	Have had made a medication administration error/s	Had no medication Administration Error
Age		
20-30	108 (46.55%)	50 (21.55%)
31-40	52 (22.41%)	6 (2.59%)
41 above	8 (3.45%)	8 (3.45%)
Gender		
Male	43 (18.53%)	24 (10.34%)
Female	125 (53.88%)	40 (17.24%)
Years in Clinical Practice		
< 1 to < 2	23 (9.91%)	18 (7.76%)
2 to < 3	9 (3.88%)	8 (3.45%)
3 to < 4	35 (15.09%)	10 (4.31%)
4 & above	101 (43.53%)	28 (12.07%)
Area of Practice		
Ward	94 (40.52%)	35 (15.09%)
Special Area:	74 (31.90%)	29 (12.5%)
Delivery Room	5 (2.16%)	2 (0.86%)
Emergency Room	12 (5.17%)	4 (1.72%)
Hemodialysis	6 (2.59%)	-
Intensive Care Unit	6 (2.59%)	2 (0.86%)
Neonatal Intensive Care Unit	2 (0.86%)	2 (0.86%)
Operating Room	41 (17.67%)	19 (8.19%)
Post Intensive Care Unit	2 (0.86%)	-
Hospital Affiliation		
Private	130 (56.03%)	51 (21.98%)
Government	38 (16.38%)	13 (5.60%)

Table 3. *Medication Administration Error Reporting*

Nurses:	Reported the Medication Administration Error/s		
	Always	Sometimes	Never
Age			
20-30	78 (33.62%)	65 (28.02%)	15 (6.47%)
31-40	28 (12.07%)	25 (10.77%)	5 (2.16%)
41 above	4 (1.72%)	4 (1.72%)	8 (3.45%)
Gender			
Male	37 (15.95%)	26 (11.21%)	4 (1.72%)
Female	73 (31.47%)	68 (29.31%)	24 (10.34%)
Years in Clinical Practice			
< 1 to < 2	25 (10.77%)	16 (6.90%)	-
2 to < 3	13 (5.60%)	4 (1.72%)	-
3 to < 4	20 (8.62%)	21 (9.05%)	4 (1.72%)
4 & above	52 (22.41%)	53 (22.84%)	24 (10.34%)
Area of Practice			
Ward	56 (24.14%)	56 (24.14%)	17 (7.33%)
Special Area:	54 (23.28%)	38 (16.38%)	11 (4.74%)
Delivery Room	4 (1.72%)	3 (1.29%)	-
Emergency Room	8 (3.45%)	8 (3.45%)	-
Hemodialysis	4 (1.72%)	2 (0.86%)	-
Intensive Care Unit	4 (1.72%)	4 (1.72%)	-
Neonatal Intensive Care Unit	-	2 (0.86%)	2 (0.86%)
Operating Room	32 (13.79%)	19 (8.19%)	9 (3.88%)
Post Intensive Care Unit	2 (0.86%)	-	-
Hospital Affiliation			
Private	86 (37.07%)	76 (32.76%)	19 (8.19%)
Government	24 (10.34%)	18 (7.76%)	9 (3.88%)

Table 4. *Perception on Reporting Medication Error/s*

Hospital Affiliations	Private		Government		Overall	
Nurses Answered:	Yes *f* (%)	No *f* (%)	Yes *f* (%)	No *f* (%)	Yes *f* (%)	No *f* (%)
1. When a medication error occurs, I think it, should be reported to the department?	179 (77)	2 (1)	51 (22)	-	230 (99)	2 (1%)
2. I believe that reporting medication errors is a worthy use of my time	171 (74)	10 (4)	47 (20)	4 (2)	218 (94)	14 (6)
3. I will report a medication error even if it does not harm the patient	158 (68)	23 (10)	43 (19)	8 (3)	201 (87)	31 (13)
4. I will report a medication error even if it is not possible to improve the patient's health status subsequent to the medication error	167 (72)	14 (6)	44 (19)	7 (3)	211 (91)	21 (9)
5. I am willing to report a medication error only when similar errors have occurred previously in the department	81 (35)	100 (43)	16 (7)	35 (15)	97 (42)	135 (58)
6. I would report a medication error even if I was not involved in it	86 (37)	95 (41)	23 (10)	28 (12)	109 (47)	123 (53)

Table 5. *Potential Barriers to Reporting Medication Error/s*

Hospital Affiliations	Private		Government		Overall	
Nurses Answered:	Yes *f* (%)	No *f* (%)	Yes *f* (%)	No *f* (%)	Yes *f* (%)	No *f* (%)
a. Personal Factors						
1. I would be viewed as incompetent by colleagues	62 (27)	119 (51)	22 (9)	29 (12)	84 (36)	148 (64)
2. I would be discriminated against by co-workers	67 (29)	114 (49)	24 (10)	27 (12)	91 (39)	141 (61)
b. Administration Factors						
1. I would receive negative feedback from nursing administration if I were to report a medication error/s	121 (52)	60 (26)	35 (15)	16 (7)	156 (67)	76 (33)
2. Nursing administration believe that on medication errors are a measure of the quality of nursing care provided	147 (63)	34 (15)	39 (17)	12 (6)	186 (80)	46 (20)
3. Nursing administration would focus on the individual nurse as the primary cause of the medication error rather than examining the system as a potential cause or contributor to the medication error	117 (50)	64 (28)	33 (14)	18 (8)	150 (65)	82 (35)
4. The response toward staff by nursing administration would not match the severity of the medication error	86 (37)	95 (41)	30 (13)	21 (9)	116 (50)	116 (50)
c. Reporting Process Factors						
1. Incident report forms are too complicated	63 (27)	118 (51)	17 (7)	34 (15)	80 (34)	152 (66)
2. Incident reporting wastes too much time (e.g. filling out report, contacting the physician)	74 (32)	107 (46)	18 (8)	33 (14)	92 (40)	140 (60)
3. I would not know how to report a medication error if it occurred	25 (11)	156 (67)	11 (5)	40 (17)	36 (16)	196 (84)

complicated ("no" n=152), waste too much time ("no" n=140), and they do not know how to report a medication error if it occurred ("no" n=196).

Discussion

MAEs are one of the most common types of errors among healthcare professionals (especially nurses), and pose a significant threat to patient safety and the quality of healthcare. The results of the study reflected that medication administration error occurs rampantly regardless the type (private, government) of hospital. It was noteworthy to note that even though participants from the government hospital come from the minority group, the nurses' MAE in the government hospital happened more as compared to those working in private hospitals. The occurrence of MAE is synonymous in other studies (Isaacs et al., 2022, Tsegaye et al., 2020) where nurses encountered an error and according to the participants, MAE happens more than three times (Tsegaye et al., 2020). The incidence of medication errors has also risen in an alarming rate during the last decade (Sheikh et al., 2017). Given the increasing rate and prevalence of medication errors in nursing (Isaacs et al., 2022). The occurrence of medication error is common to younger nurses aged 20 to 30 years old. Since they are beginner nurses, they have the knowledge and the know-how but they still lack comprehensive experience. They focus only on tasks and follow a "to do" list (Schutijser et al., 2018). But as they age, up medication error also decreases. Medication error is frighteningly rampant among nurses with four years or more clinical experience, which is in consonance in Sears et al (2017) where nurses with a higher level of current clinical nursing experience have experienced more medication error. Skills and knowledge decay can attribute to such occurrence due to nurses' disinterest in learning about nursing care trends. Some have nursing skills that begin to decay immediately after training due to lack of use for 1 year since the average participant performs less than 92% of their original skill level (Ericsson, 2015). In Sneck et al (2016), age of the respondent and working experience of nurses were significantly associated with medication administration error. Higher fear of consequences on reporting errors is realized by nurses with higher ages and work experiences (Vrbnjak et al., 2016) suggesting that the consequences of reporting errors are real, rather than only a perception. As the nurses advance in age and in their work experience, they get more aware of the seriousness of these medication error consequences. Contrary to such findings in Hayes et al (2015) where nurses' incidences of medication errors declined substantially as they gained work experience of 6 years. Inexperienced nurses should be the target for training and supervision with a focus on medication administrations (Hayes et al., 2015).

Most of the participants responded that they have had a medication error within their clinical practice. However, the reporting of this incidence is below the occurrence of actual medication error. Literature review denoted that MAE may be underreported (Morrison et al., 2018, Scott, & Henneman, 2017) and is one of the challenges in reporting medication administration errors (Afaya et al., 2021). Reporting errors is fundamental to error prevention and this study also showed that nurses responded "sometimes" when asked if they reported their actual medication error incidence. It reflected that medication error reporting is not as fully implemented as it should be especially in MAER. Such reality has been supported by past researches that claim medication error rate have been underreported (Zarea et al., 2018). Medication administration error reporting needs to be implemented as part of the healthcare delivery system because health care professionals (like nurses) bear that responsibility of recognizing and reporting medication administration errors that could jeopardize patient safety (Kalra et al., 2013).

Majority of responses from the nurses in this study do agree that MAE should be reported. Hence, building awareness of the importance of reporting MAEs is one measure to prevent medication error incidents in a healthcare system and can serve as an important tool for improving patient safety using a consistent reporting system and providing care based on guidelines that could prevent these occurrence of harm to hospitalized patients (Tsegaye et al., 2020). A positive attitude towards MAER is denoted in the results which resonates with Almutary and Lewis (2012). Nearly all of the nurses believed that reporting MAEs was a good use of their time. There was also a greater number of nurses who believed that they would report MAEs even if they did not harm the patient or improve the patient's health. Thus, indicating that nurses have a positive attitude about MAEs reporting. Similar in Sheikholeslami et al (2021), nurse managers' and co-workers' attitudes are predictors for nurses' attitudes towards medication administration error reporting. Regardless of nurse managers' and coworkers' attitudes towards medication administration error reporting, nurses are likely to report medication administration errors if they detect them (Sheikholeslami et al., 2021). Nurses described that they would only report a medication error when similar errors have occurred previously in their department and would not report a MAE when they are not involved in the incidence. Comparable in Kruer et al (2014), many errors go unreported because of nurses' fear of retaliation, yet these unreported errors may contain the very vital information needed to uncover healthcare system flaws. Medication errors will remain elusive unless health care providers especially managers and administrators are willing and able to focus attention where it is needed-on systems rather than individuals (Kruer et al., 2014). The fear of consequence limits nurses' willingness to report. It reflects a lack of support from the institution that can bring insecurity to nurses to admit their error. The fear of reporting is entangled

with the culture of shame, blame, and punitive responses in healthcare settings. Healthcare professionals fear punitive repercussions impacting their practices where they are less likely to report errors. This reluctance to disclose errors undermines the ability to identify and to rectify systemic issues, perpetuating a cycle where errors remain unaddressed. Research has consistently shown that environments characterized by fear of blame are associated with lower reporting rates, which hinders efforts to improve patient safety and quality of care (Smith et al., 2022). In some hospital managements, reporting MAE is highly encouraged but nurses still had concerns and believed that they would face consequences particularly with their administration if they reported their MAEs. This behavior according to Yung et al (2016) is an act that is traditionally punitive. This concern led to underreporting of nurses. Even if hospital management encourages errors to be reported without recrimination, nurses' attitudes toward medication administration error reporting are not very positive and fear is the most prominent barrier contributing to underreporting (Yung et al., 2016). Nurses feel insecure after reporting an error and its consequences because they experienced finger-pointing and lack of management support (Peyrovi et al., 2016). With voluntary reporting systems, fears of recrimination or heavy workloads are the top probable cause why nurses are hesitant in reporting a medication error (Teoh et al., 2015).

The barriers in reporting medication administration errors classified in the study are the following: Personal Factors, Administration Factors, and Reporting Process Factors. The result reflected under Personal Factors reveal that nurses are not bothered if they would be viewed as incompetent and be discriminated by colleagues when reported a medication error for as long as they adhere to the hospital policy in the medication administration process. There are studies, however, that reported some factors that may hinder nurses to report mainly because of fear of reputational impact (Vrbnjak et al., 2016). Nurses do not want to be stigmatized by others and they do not want to tarnish the reputation of the organization (Peyrovi et al., 2016). Participants are afraid of being considered as professionals who make many mistakes and they are terrified of the thought that it will demoralize the reputation of their profession. An important work goal of nurses is to aspire to a practice directed toward preventing or reducing medication errors (Keiffer et al., 2015). In terms of The Reporting Process, nurses do not agree that the report forms are too complicated and reporting is a waste of time. In consideration of previous studies that showed how the time required for reporting error was identified as a low significant factor of under-reporting (Tabatabaee et al., 2014), this study demonstrates that nurses know how to report a medication error. On the other hand, Administration Factors reflected that the respondents are unwilling to report a medication error because of the probability of receiving negative feedbacks from their respective administrators. In Tabatabaee et al (2014), nurses who reported were blamed by their supervisors. Fear of being blamed by supervisors was found among the high-rank barriers to reporting errors (Tabatabaee et al., 2014). Supervisors' negative reaction has been identified as a common reason for not reporting medication errors (Tabatabaee et al., 2014) even if there is guidance for nurses that indicates that all errors should be immediately reported (Haw et al., 2014). Nurses would always be viewed as the primary causes of the medication error rather than examining the system as a potential cause or contributor, leading to a shift in focus from the person to the system (Vrbnjak et al., 2016). Hospital management encourages errors to be reported without recrimination, however nurses still fear adverse consequences (Vrbnjak et al., 2016). Administrative management focus on the reported causes with their pre-conceived notion that nurses' medication errors are a measure of the quality of nursing care provided (Vrbnjak et al., 2016). Hence, the more administrative power or hierarchy that nurses encounter, the more barriers they perceived in the process of reporting MAE.

In Peyrovi et al (2016), managers must provide the required personal, professional and legal support for nurses to encourage them to effectively report errors and to discover the root cause of errors in order to take measures preventing them. And to promote a culture of safety in the organization, Padgett et al (2017) identified the following: strong leadership and support, direct and open communication, strong teamwork and staff empowerment, that are vital components in the promotion of a culture of safety in an organization. Efforts to minimize medication errors were followed, though according to the Ministry of Health and Medical Education (Mobaraki et al., 2013), there is an absence of comprehensive reliable source of information and statistics on medical errors up to date.

Limitation of the study

The survey instrument used is self-reporting and it might be assumed that the questionnaire did not have an in-depth or fully investigated variables. The sample population size is limited showing how results might vary in broader population and different institutions. Finally, there were no inferential statistics computed since the study was purely descriptive.

The findings of the study are in no way indicative of nursing practice as a whole and further research studies are highly recommended to confirm assumptions.

Conclusion

MAEs are one of the most common types of errors among nurses and it was concluded that most of the participants responded that they have had a medication error within their clinical practice regardless of the type of their employment

(private or government). Un-reporting of this incidence was also realized in this study and this poses a significant threat to patient safety and the quality of healthcare. Nurses generally have a positive attitude towards MAER as reflected in this study that most are willing to report an incidence. They believed that reporting MAEs was a proper use of their time. However, there is a negativity towards administrative factors of MAER which was echoed as the top barrier in the study. Nurses are reluctant to report mainly because of fear of reputational impact. They do not want to be stigmatized by others and they do not want to tarnish the reputation of the organization particularly under their nursing administration. Participants are afraid of being considered as professionals who make many mistakes and they are terrified of the thought that it will demoralize the reputation of their profession. Challenges in reporting medication administration errors were also observed under personal factors; nurses are not bothered if they would be viewed as incompetent and be discriminated by colleagues when they report a medication error for as long as they adhere to the hospital policy in the medication administration process.

Medication administration error/s is a reality and the system of reporting is not fully established as there are cases that remain to be unreported. Depending on the institution's policy in medication administration error, reporting protocols relies heavily on hospital management. The culture of shame, blame, and punitive systems has significant implications for medication error reporting. To enhance reporting rates and improve patient safety, healthcare organizations must move towards a more supportive and non-punitive approach. Hospital managers must provide the required personal, professional and legal support for nurses to encourage them to effectively report errors in order to discover the root cause of errors and take measures to prevent them. By promoting a culture of safety in the organization that supports open communication, both teamwork and staff empowerment is encouraged thereby promoting a culture of safety in an organization.

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Conflict of Interest

The authors declare no conflict of interest and did not receive any funding / grant in the conduct of the study.