NURSING PERCEPTIONS OF MEDICATION ADMINISTRATION ERRORS

Marwa R. Moustafa Ph.D., Elham Y. Elhanafy Ph.D.
Assistant professor of Medical Surgical Nursing, Faculty of Nursing Benha University, Egypt
Lecturer of Nursing Administration, Faculty of Nursing Damanhur University, Egypt

Abstract

Background; Patient safety is a significant challenge facing healthcare systems today. An important part of patient safety is the issue of medication administration within the acute-care setting that has long been the focus of scrutiny and research because it contributes directly to patient morbidity and mortality. **The present study aimed to**: (1) Assess nurse's perception of about reasons for medication errors.(2) Assess the nurse's reasons for not reporting medication errors and (3) Collect the percent of medication errors that actually reported by nurses. **Methods:** In this descriptive study, 100 nurses who were working in Damanhur National Medical Institute, and data were collected by means of a researcher-modify questionnaire including demographic attributes (age, gender, working experience, etc), and contributing factors in medication errors. **Result:** more than half (59%) unit staffing level are inadequate, about third of the sample (64%) long shift/over time and less than (44%) was the nurse miscalculates the dose. The highly rank for reason of why medication error occur the highly percentage weight at the Administrative related reason at response by nursing administration do not match the severity of the error about (82%). **Recommendation:** Provide continuous in-service educational programs on quality and safety which are required for nurses to maintain safe work environment and safety climate. **Conclusion**: Create incentives for nurses to report errors, and demonstrate positive responses for them when reporting medication errors.

Key Words: Nursing Perception, Medication Errors. Patient safety

INTRODUCTION:

Medical errors have been recognized as a relatively common and potentially avoidable cause of patient harm. In its landmark report, To Err is Human: Building a Safer Health System, the Institute of Medicine (IOM) estimated that up to 98,000 deaths occur each year because of preventable medical errors. Higher rates were observed in intensive care units (ICU), operating rooms, and emergency departments.1.Medication error is one of the most common medical errors(Goeckner et al. 2006) Medication error is any error committed in the medication prescription, dispensation or administration process, which may cause negative consequences or not(Throckmorton & Etchegaray 2007).

Moreover, the medication error means a disorder in the treatment process, which is followed by a potential or actual risk of hazard for patient (Britten 2009). Nowadays, medication errors have attracted more attention because of the

complications like higher mortality rate and cost of health‐care (Kelishadi & Mousa 2012). Medical errors have been recognized as a relatively common and potentially avoidable cause of patient harm. In its landmark report, To Err is Human: Building a Safer Health System, the Institute of Medicine (IOM) estimated that up to 98,000 deaths occur each year because of preventable medical errors. Higher rates were observed in intensive care units (ICU), operating rooms, and emergency departments (Kohn et al. 2009).

Medication errors strike at the heart of being a nurse—the responsibility to do good and avoid harm. Medication errors have serious direct and indirect results, and are usually the consequence of breakdowns in a system of care. Direct results include patient harm as well as increased healthcare costs. Indirect results include harm to nurses in terms of professional and personal status, confidence, and practice (Ann 2004).

Generally, the errors can be happened in different steps of the medication process, but a considerable number of errors occur during medication administration that registered nurses play a vital role in it because of their responsibility for administering drugs in the hospitals (Clifton‐Koeppel 2008). Nurse related medical errors like other medical staffs' errors may cause reversible and irreversible complications which result in higher cost and even increasing mortality.[8]Studies show that some factors such as medication miscalculations, lack of knowledge and proficiency as well as neglecting the hospital's medication protocol due to lack of time, extreme tiredness, inadequate work experience and inappropriate work environment may all be related to the medication errors made by the nurses (Ann M.2004).

Hend and Barber (2000) classified the causes for medication errors into three categories of personal, contextual and knowledge‐based factors, personal factors include, stress, tiredness, confusion, the physician prescription, errors of orders implementation, inadequate attention to details, lack of job‐satisfaction, unpleasant workplace, decreased sense of commitment and career conscience and so on. Some examples of contextual factors are the lack of competent and skilled staffs, heavy overtime work, long work days, a crowded ward, necessity of intensive cares, and etc., and some of the knowledge‐based causes include, inadequate pharmaceutical knowledge and experience, no awareness about patients' and drug mathematical calculations.[4]

Obviously reporting is fundamental to the broad goal of medication error reduction. Underreporting of medication errors is a significant problem among nurses. Many barriers were identified that could weaken nurses' willingness to report errors and diminishes the opportunity to learn from these errors (Maddox 2013).For these reasons, barriers to report medication errors must be explored from nurses' perceptions in their units.(Chaing 2005 and Blegen 2005)

Although, a severe shortage in the nursing workforce may increase the probability of medication errors occurrence, it can be undoubtedly said that it isn't the only reason for the medication errors. It should be therefore, investigated to find out which factors may lead to the medication errors in hospitals. Since, the medication errors made by a health care team including physicians and nurses may affect the outcome and quality of health care, in addition to the fact that the nursing personnel are more involved in medication administration activities than other health‐care workers, identifying the factors contributing to medication errors occurrence from the viewpoint of nurses will help reduce the medication errors to a minimum and enhance the quality of nursing services Akram et.al.2013. Accordingly, this study was conducted to determine contributing factors of medication errors from viewpoint of nurses in Hospital National Institute of Damanhur.

AIM OF THE STUDY

The aim of the study is to:

1- Assess nurse's perception of about reasons for medication errors.
2- Assess the nurse's reasons for not reporting medication errors.
3- Collect the percent of medication errors that actually reported by nurses.

SUBJECT AND METHODS

Research design:

Descriptive research design was utilized in this study. It used to assess Nurse Perceptions of medication errors, what we need to know for patient safety.

Technical design:

Setting:

The study was conducted in Medical and surgical units at Damanhour National Medical Institute

Subjects:

A convenience sample of 100 registered nurses whose works in that units (55) nurses in medical unit and 45 nurses in surgical unit with different levels of education, years of experience, age, working at Damanhur National Medical Institute where chosen to constitute the subjects of this study. The institute is the largest governmental medical institute that provides health care services for the population of El Beheira Governorate (n= 564 beds). The hospital establish internal quality system and applying it since.

Tool:

The tool was used in this study for data collection was a questionnaire for Perceptions of medication errors it includes 4 parts:

Part I: Addressed information related to nurse's socio demographic data such as age, gender, level of education, years of experience, time of shift and units.

Part II: Assessed nurse's perceptions about reasons for medication errors occur. It includes 16 items which include:

1- Physician's medication orders are not legible and difficult to read.
2- Verbal orders are used instead of written orders.
3- The names of many medications are similar and look alike.
4- The medication labels/ packaging are of poor quality.
5- Poor communication between nurses and physicians.
6- Physicians change orders frequently.
7- Abbreviation is used instead writing the orders out completely.
8- Pharmacy dose not prepare or label the medication correctly.
9- Unit staffing level is inadequate.
10- Long shift/over time.
11- The nurse miscalculates the dose.
12- The nurse adjusts an infusion device incorrectly.
13- Distraction and interruptions.
14- Nurses are tired and exhausted.
15- Not double – checking dose.
16- Lake of adequate information about the patient and medication.

Part III: It comprised (15 items) related to nurses reasons for not reporting medication errors which include:

a- Administrative related reasons:

1- No positive feedback is given for passing medication correctly.
2- Nurse administration focuses on the person rather than looking at the system.
3- Too much emphasis is placed on medication errors as a measure of quality of care.
4- Responses by nursing administration do not match the severity of the severity of the error.

b- Individual/personal reasons:

1- Nurses could be blame if something happened to the patient.
2- Nurses believed that other nurses will think they are incompetent.
3- Nurses fear adverse consequence from reporting.
4- Patient might develop negative attitude.
5- Nurses fear reprimand from physician.
6- Nurses fear losing their license.

7- Nurses want to avoid potential publicity of medication errors in the media.
8- Nurses do not recognize an error occurred.
9- Medication error is not clearly defined.
10- Nurse may not think the error is important enough to be reported.
11- Filling out an incident report for a medication error takes too much time.

Scoring system:

Scoring system was For the first two parts, asked the nurses to check their level of agreement with each item using a likert scale. Type scale, where responses range from 1 strongly disagree to 6 strongly agree while in the third sections, respondents are asked to estimate the percentage of errors reported using A 10-point scale ranging from 100%.

Content Validity & Reliability:

Content validity was used for the modified tools and the designed it to determine whether the tools cover the aim. The stage developed by a Jury of seven experts (assistant professors of Medical-Surgical Nursing &Nursing Administration) from the Faculty of Nursing, Benha , Mansoura , and Ain Shams University. Test reliability of the proposed tools was done by cronbach's alpha test.

Pilot study:

The pilot study was applied on five nurses within the selected criteria to test the applicability of tools, arrangement of items, and estimate the time needed for each sheet, and then excluded from the study sample after modification of the tools.

Field work:

Permission to conduct the study will be obtained from the authorities in the previous mentioned setting and verbal consent will be obtained from each participant. The researcher will offer adequate information about the study purposes and its significance. Participation is voluntary. Participants will be assured that their response would be confidential and information that might reveal their identity would not be recorded, and only aggregated data would be communicated. The collection of data takes over a period of three months starting from September 2012 to December 2012. Data was collected two days a week at the medical and surgical words at Damanhur National Medical Institute.

Administrative &ethical consideration:

An official permission was obtained from Dean of faculty of Nursing and director of Damanhour National Medical Institute before conducting the study. Additional oral consents were taken from the nurses who participated in the study after explanation of its purpose. They were given an opportunity to refuse the participation, and they were assured that there information which would be used for research purposes only.

Statistical design:

Upon completion of data collection, each sheet was manually scored after that data collected were organized, categorized, tabulated and analyzed using electronic computer. Data were presented in tables by using percentage, frequency.

Limitation of the study:

- Nurses were often busy in administrative duties, so they take a long time to complete answering the test.
- In night shift there are two nurses for 15 days monthly. So it can not observe every nurse at night shift.
- Some nurses take light work and not deal with patients.

Results:

Table (1) shows that sample's age, finding of the present study revealed that more than half (53%) were in the age group (20-29 years). As regard their gender were female (91%), level of education it was found that more than half (57%) were having secondary &technical school, it is clear that the years of experience <10 years was about (65%), more than half study sample attending morning shift (55%) and more than half form medical units (55%).

Data in table (2) demonstrates that, the majority of study sample (30%) were strongly agree as verbal orders are used instead of written and (46%) at the name of many medication are similar and look alike. Also, more than half of the sample (59%) was at the medication labels/ packaging are of poor quality and (42%) with Poor communication between nurses and physicians, while more than half (58%) at Physicians change order frequently, less than half (49%) at Abbreviation are used instead writing the orders out completely. Moreover, about (38%) was pharmacy dose not prepare or label the medication correctly, more than half (59%) unit staffing level are inadequate, about third of the sample (64%) long shift/over time and less than (44%) was the nurse miscalculates the dose, also less than half (48%) was at the nurse adjusts an infusion device incorrectly, about (42%) was Distraction and interruptions, while (39%) because the Nurses are tired and exhausted. Additionally, (37%) at not double – checking dose and more than half (56%) was lake of adequate information about the patient and medication but, at the verbal orders are used instead of written orders (30%) was moderate agree. Finally, strongly disagree (33%) for one third of the sample was with physicians' medication orders are not legible and difficult to read.

Regarding the rank order by mean score of reason of why medication errors occurs, data in table (3) illustrates the highly reason for Long shift/over time was about (92.33%) and the less percentage was (53.83%) from Physicians medication orders are not legible and difficult to read prescribing.

Table (4) show that the highly percentage score (40%) was strongly agree at reason of medication error as administrative related reason for item no positive feedback is given for passing medication correctly. Also table show about (67%) strongly agree at Individual/personal reasons for item Nurses could be blame if something happened to the patient.

According to table (5), the highly rank for reason of why medication error occur the highly percentage weight at the Administrative related reason at response by nursing administration do not match the severity of the error about (82%), as regard to personal reason the highly rank show (91.5%) at nurse Nurses could be blame if something happened to the patient.

According to table (6)there is anegative Correlations between administration causes and nursing causes in medication errors.

Table (1): Socio-demographic characteristics of studied sample

Socio demographic variable	No = 100	Percent %
Age (year)		
20-29 years	53	53.0
30-39 years.	39	39.0
40-49 years	5	5.0
50+	3	3.0
$\overline{X}$ ± SD	29.24 ± 5.53	
Gender		
Male	9	9.0
Female	91	91.0
Level of education		
Secondary & technical school	57	57.0
Bachelor degree	43	43.0
years of nursing experience		
< 10	65	65.0
10-19	32	32.0
20+	3	3.0
Mean ± SD	7.79 ± 3.69	
Time of shift		
Morning	55	65%
Afternoon	45	45%
Setting		
Surgical unit	45	45%
Medical unit	55	55%

Table (2): Frequency distribution of reason why medication errors occur

Items	Strongly disagree		Moderate disagree		Mild disagree		Mild agree		Moderate agree		Strongly agree	
	No	%	No	%	No	%	No	%	No	%	No	%
1- physicians medication orders are not legible and difficult to read	33	33.0	12	12.0	11	11.0	9	9.0	13	13.0	22	22.0
2- Verbal orders are used instead of written orders.	14	14.0	14	14.0	8	8.0	14	14.0	30	30.0	20	20.0
3- The names of many medications are similar and look a like	5	5.0	16	16.0	3	3.0	7	7.0	23	23.0	46	46.0
4- The medication labels/ packaging are of poor quality	5	5.0	2	2.0	6	6.0	2	2.0	25	25.0	59	59.0
5- Poor communication between nurses and physicians	17	17.0	2	2.0	9	9.0	18	18.0	12	12.0	42	42.0
6- Physicians change order frequently	4	4.0	5	5.0	1	1.0	3	3.0	29	29.0	58	58.0
7- Abbreviation are used instead writing the orders out completely.	3	3.0	6	6.0	16	16.0	4	4.0	22	22.0	49	49.0
8- pharmacy dose not prepare or label the medication correctly	0	0	9	9.0	13	13.0	24	24.0	16	16.0	38	38.0
9- unit staffing level are inadequate	6	6.0	1	1.0	0	0	0	0	34	34.0	59	59.0
10- long shift/over time	0	0	3	3.0	0	0	1	1.0	32	32.0	64	64.0
11- the nurse miscalculates the dose	7	7.0	10	10.0	0	0	2	2.0	37	37.0	44	44.0
12- the nurse adjusts an infusion device incorrectly	2	2.0	3	3.0	10	10.0	1	1.0	36	36.0	48	48.0
13- Distraction and interruptions	4	4.0	5	5.0	9	9.0	16	16.0	24	24.0	42	42.0
14- Nurses are tired and exhausted	15	15.0	8	8.0	12	12.0	4	4.0	22	22.0	39	39.0
15- not double – checking dose	3	3.0	0	0	21	21.0	13	13.0	26	26.0	37	37.0
16- lake of adequate information about the patient and medication	6	6.0	11	11.0	5	5.0	12	12.0	10	10.0	56	56.0

Table (3): Rank order by mean score of reason of why medication errors occurs

Item	Rank	Mean	Percentage weight
Long shift/over time	1	5.54	92.33
Unit staffing level are inadequate	2	5.32	88.67
Physicians change orders frequently	3	5.22	87.00
The medication labels/ packaging are of poor quality.	4	5.16	86.00
The nurse adjusts an infusion device incorrectly	5	5.1	85.00
The nurse miscalculates the dose administrating.	6	4.84	80.67
Abbreviation is used instead writing the orders out completely prescribing.	7	4.83	80.50
Distraction and interruptions administrating	8.5	4.77	79.50
Lake of adequate information about the patient and medication administrating	8.5	4.77	79.50
Not double – checking dose	10	4.7	78.33
The names of many medications are similar and look alike prescribing	11	4.65	77.50
Pharmacy dose not prepare or label the medication correctly processing	12	4.61	76.83
Poor communication between nurses and physicians	13	4.32	72.00
Nurses are tried and exhausted	14	4.27	71.16
Verbal orders are used instead of written orders prescribing	15	3.92	65.33
Physicians medication orders are not legible and difficult to read prescribing	16	3.23	53.83

Table (4): Frequency distribution of reasons why medication errors occur.

Items	Strongly disagree		Moderate disagree		Mild disagree		Mild agree		Moderate agree		Strongly agree	
	No	%	No	%	No	%	No	%	No	%	No	%
a- **Administrative related reason** 1- No positive feed back is given for passing medication correctly	3	3.0	3	3.0	9	9.0	26	26.0	19	19.0	40	40.0
2- Nurse administration focuses on the person rather than looking at the system	6	6.0	9	9.0	19	19.0	31	31.0	17	17.0	18	18.0
3-Too much emphasis is placed on medication errors as a measure of quality of care	3	3.0	3	3.0	3	3.0	21	21.0	36	36.0	34	34.0
4- responses by nursing administration do not match the severity of the error.	0	0	6	6.0	3	3.0	19	19.0	37	37.0	35	35.0
b- **Individual/personal reasons** 1- Nurses could be blame if something happened to the patient.	0	0	3	3.0	3	3.0	3	3.0	24	24.0	67	67.0
2- Nurses believed that other nurses will think they are incompetent	0	0	3	3.0	9	9.0	22	22.0	31	31.0	35	35.0
3- Nurses fear adverse consequence from reporting	0	0	3	3.0	8	8.0	5	5.0	21	21.0	63	63.0
4- Patient might develop negative attitude	0	0	3	3.0	8	8.0	8	8.0	22	22.0	59	59.0
5- Nurses fear reprimand from physician	0	0	3	0	0	0	22	22.0	29	29.0	49	49.0
6- Nurses fear losing Table their license.	0	0	6	6.0	0	0	15	15.0	16	16.0	63	63.0
7- Nurses want to a void potential publicity of medication errors in the media.	8	8.0	0	0	13	13.0	10	10.0	21	21.0	48	48.0
8- Nurses do not recognize an error occurred	17	17.0	14	14.0	17	17.0	0	0	15	15.0	37	37.0
9- Medication error is not clearly defined	10	10.0	11	11.0	9	9.0	0	0	20	20.0	50	50.0
10- Nurses may not think the error is important enough to be reported	7	7.0	6	6.0	10	10.0	0	0	25	25.0	52	52.0
11- filling out an incident report for a medication error takes too much time	6	6.0	10	10.0	9	9.0	0	0	18	18.0	57	57.0

Table (5): Rank order by mean scores of reasons of why medication errors occur.

Item	Rank	Mean	Percentage weight
a-Administrative related reason 1. Response by nursing administration do not match the severity of the error	1	4.92	82.00
2. Too much emphasis is placed on medication errors as a measure of quality of care	2	4.86	81.00
3. No positive feedback is given for passing medication correctly	3	4.75	79.17
4. Nurse administration focuses on the person rather than looking at the system	4	3.98	66.33
b- Individual/personal reasons 1- Nurses could be blame if something happened to the patient	1	5.49	91.50
2- Nurses fear adverse consequence from reporting	2	5.33	88.83
3- Nurses fear losing their job.	3	5.30	88.33
4- Nurses fear reprimand from physician	4	5.27	87.83
5- Patient might develop negative attitude	5	5.26	87.67
6- Nurses believed that other nurses will think they are incompetent	6	4.86	81.00
7- Nurses may not think the error is important enough to be reported	7	4.86	81.00
8- Filling out an incident report for a medication error takes too much time	8	4.85	80.00
9- Nurses want to avoid potential publicity of medication errors in the media	9	4.80	80.00
10- Medication error is not clearly defined	10	4.59	76.50
11- Nurses do not recognize an error occurred	11	3.93	65.50

Table (6): Correlations between administration causes and nursing causes in medication errors.

Items	Percentage
Administrations causes	- 0. 261*
Nursing causes	- 0.345*

DISCUSSION

Nurses play a major role in reducing medication errors and frequently administer medications in patients' healthcare settings (Clark etal., 2012). Thus, they are the last line of defense to safeguard against medication errors as administration is the last part of the medication process (Flin etal., 2006). Therefore, the aim of the present study was to assess nurse's perception of about reasons for medication errors,aAssess the nurse's reasons for not reporting medication errors, and collect the percent of medication errors that actually reported by nurses.

Regarding demographic characteristics, there was no relation between participants' age and experience with reasons of why MAEs occur or not reporting. This means that all nurses are equally vulnerable to experience errors regardless of their age or years of experience, as well as they didn't protect from incurring medication errors. The same findings were reported by Armutlu et al. (2008). In contrast, the study of Flor et al. (2012) and Zein Eldin and Abd Elaal (2013) found that working experience of nurses is an important factor that affects general medication errors, in which nurses who have worked more years are less prone to having wrong time errors as compared to nurses who have less working experience.

Concerning sex, there were significant relations with all reasons of why MAEs not reporting and only with physician-nurse reasons of why MAEs occur. Accordingly, Dumo (2012) suggested that nurses and physicians don‘t come to work to harm patients; unfortunately, the hard reality is that errors and subsequent harm to patients do happen. They administer hundreds of medications daily to multiple patients with multiple disease processes and via multiple routes.

The finding of the present study revealed that sample’s age more than half were in the age group (20-29 years). As regard their gender were female (91%), level of education it was found that more than half were having secondary &technical school, it is clear that the years of experience <10 years was more than half ,more than half study sample attending morning shift and more than half form medical units

The majority of study sample were strongly agree as verbal orders are used instead of written and at the name of many medication are similar and look alike, also Poor communication between nurses and physicians, while more than half at physicians change order frequently and less than half at Abbreviation are used instead writing the orders out completely. In current study, the most reason why of

medication administration errors (MAEs) may occur is medication package. This includes similarity of many medications' names, different medications look alike, and similarity of many. In fact, once a medication has been removed from its packaging, it‘s hard to identify and can be easily confused with another one. Thus well-designed medications' names, labels and packages can support safe and appropriate use by healthcare professionals, patients and consumers. The nurses must take the medication to the patient‘s bedside in its original packaging and open the packaging immediately before giving the dose.

This result agreed with Institute Safe Medication Practice (2013), which, look-alike/sound-alike medication names can result in medication errors. Misreading medication names that look similar is a common mistake. These look-alike medication names can lead to errors associated with verbal prescriptions. For these reasons, the Joint Commission published a list of look-alike/sound-alike drugs that are considered the most problematic medication names across settings. Mrayyan et al.(2007) supported this finding and suggested that the medications' labels and packages may be confusingly the health care personnel due to do not place important information prominently and small font size of displaying text, which may lead to poor readability. Roy et al (2005) pointed out that miscommunication of drugs orders, which can involve poor handwriting, confusing between drugs with similar names, misuse of zeroes and decimal points. Moreover, environmental factors such as lighting, heat, noise and interruptions that can distract health professional from their nursing tasks.

The finding of the present study revealed that nurses perceived high barriers to more than half at physicians change order frequently, less than half at abbreviation are used instead writing the orders out completely the illegibility of physician’s order in patient’s file. the illegibility of patient’s medicine card and kardex as the most effective factors contributing to the medication errors. Besides the physician’s prescription errors, which are an important medication errors (Font etal., 2008 and Lee etal., 2009). At the same context, the illegibility of physician’s handwriting is one of the most effective factors in medication errors occurrence according to Harding & Petrick 2008, the illegibility of physician’s orders, the frequent changes in the physician’s orders, giving verbal orders instead of written orders, and using some uncommon abbreviations in medical orders will increase the possibility of error occurrence while transfer and an implementation of drug orders.

Some studies have even pointed out the role of interaction between health care team members as an important factor in preventing the medication errors, so as the most precise medication orders may be inexpressive and ineffective without a good interaction between nursing team (Shahrokhi, et al.2013).

In addition, the present study revealed that, more than half of unit staffing levels are inadequate and the medication error occurred because the Nurses are tired and exhausted. From research point of view nursing is considered as a stressful job, however, various factors such as heavy workload, sleeping disorders, and so on will even intensify this stress, so it can affect the mental and emotional condition of nurses as well as their professional performance, additionally, the shortage in nursing work. This result was consistent with (Harding 2008, , Hassan etal.,2009 and Olds Clarke 2010) they found that, tiredness is the second most effective factor in medication errors from the viewpoint of nurses participating in their research and many other researchers have also referred to tiredness as an effective factor. Also, Olds & Clarke (2010) and Garrett (2008) mention that, the nurses face to a heavy workload and increased responsibility, which is considered as an important factor in increasing medication errors. Furthermore, an inadequate nursing staff for different work shifts, the reason, which is mentioned in all studies conducted about the reasons of medication errors (Mark&, Belyea 2009). Shahrokhi etal., (2013) From the viewpoint of nurses participating in their study, just working the night‐shift may relatively be contributing to the medication errors occurrence and other work shifts are almost ineffective. Nurses usually should organize priorities based on changing the clinical situation for different patients, in addition, they have to carry out several tasks simultaneously, so it is more likely to do tasks in a hurry and commit an error (Warholak et al. 2011).

In addition, Eslamian, et al., (2010) showed in their study that the shortage in nursing work force and consequently high workload and overtime working of nurses are common reasons for making errors; whereas in some other studies, patient‐related, individual and professional factors have been more significant. Heavy workload is actually the consequence of insufficient nurse staffing, hence appropriate nurse staffing by employing new personnel, or moderating the working hours, and eliminating the irrelevant tasks and activities can be beneficial for improving the working condition of the nursing personnel (Jones and Treiber 2010).

In this study, more than half of the sample was at the medication labels/ packaging are of poor quality Moreover, about (38%) was pharmacy dose not prepare or label the medication correctly. According to Shahrokhi etal., (2010) factors such as drug name and label similarities, similar packing, and the way of drugs arrangement on shelves have also pointed out as effective factors in their research. Unfortunately, such factors are sometimes ignored of course, these factors are not in control of the clinical care team, so they cannot solve the problems relating to similar drug names, labels and packing, but they can at least prevent some medication errors by an appropriate arrangement of drugs in the treatment room.

What is more, the present study showed that, the highly percentage score (40%) was strongly agree at reason of medication error as administrative related reason for item no positive feedback is given for passing medication correctly. This

may be because nature of people focuses on the mistakes more than good things. at the same context, The primary administrative barriers were no positive feedback for giving medication correctly and too much emphasis on MAE as a quality indicator of nursing care. These barriers indicated instructor's management and attitudes toward MAEs (Hamid & Nayereh 2009). But, Coyle (2005) who found that, lack of recognition and understanding of medication errors as well as fear of administrative decision toward who caused medication error were considered among the most barriers that nurses perceived to report medication errors. While Hartnell et al., (2006) recommended that hospital and nurse managers must demonstrate positive responses to staff members for reporting medication errors and adhere to a quality management program that is perceived by nurses as designed to improve patient safety rather than discover mistakes. Nurses must be involved and believe in this process.

the highly percentage score (67%) was strongly agree at reason of medication error as administrative related reason for item Nurses could be blame if something happened to the patient. Nurses could fear from and avoid being blamed for making any error for the patient. Additionally, this could be explained as nurses may not clearly recognize the actual meaning of what is medication error and they fear to ask about it as well as fear of reporting any error because the unexpected responses of their administrators. Fear of being blamed and fear of administrators' reactions hinder them to report any error. On the contrary, Abou Hashish etal., (2013) found that nurses gave the lowest mean score to the "blame system" in the safety climate components. This could be attributed to the fact that it is possible that a blameless reporting culture is still underdeveloped in the hospital of the study. Health care professionals especially physicians as well as nurse managers tend to judge nurses' performance depending on reporting any error to them. Elliot (2010) found in her study, staff nurses also fear being revealed and labeled as someone who has made a medication error. Nurses and nurse managers report that they fear for the reputation of their service or unit. This goes in the same line with Duthie (2006) who stated that reporting errors reflected so badly on nurses that nurses did not like to report any error especially to their mangers and physician to avoid blame. In this respect, Ann & Denise (2004) found that, Nurses deliberately decide to not report some medication errors. It is estimated that 95% of medication errors are not reported because staff fear punishment.1 Disciplinary actions including job loss also affect reporting rates.

Moreover, the results of the present study show that, the highly rank for reason of why medication error occurs was for the administrative related reason at response by nursing administration do not match the severity of the error. Likewise, nursing students agreed that administrative barriers and fear were the main reasons for not reporting medication errors (4.31 administrative barriers, 4.24 fear) (Hamid & Nayereh 2009).Similar findings were also supported in previous studies by using the

same study instrument among nurses (Chiang and Pepper 2006; Blegen et al 2004; Wakefield et al 2004; Wakefield et al 1996).

Finally, human errors are impossible to be completely prevented. However, it is obviously practical that improve the quality of healthcare services through proper managerial and organizational preparations by means of moderating the work hours and overtime work, eliminating the tasks and activities irrelevant to a nursing career, increasing the job motivations, improving nurses' professional knowledge, and enhancing the work environment standards (Yon kyong and Barbara 2011).

CONCLUSION

Findings from this study suggest medication administration error occurrences among nurses are often underreported. Administrative barriers and fear were found to be the top two reasons for not reporting medication administration errors among nurses. Significantly this study found, the highly reason for Long shift/over time was about and the less percentage was (from Physicians medication orders are not legible and difficult to read prescribing. It was found administrators must demonstrate positive responses to their nursing staff for reporting medication administration errors as a means to improve patient safety.

Recommendation

Hospital administrators should:

1- Put a great emphasis on a strong culture of safety to focus on changing systems toward provision of safe work climate and allowing nurses to learn from errors reporting.
2- Provide continuous in-service educational programs on quality and safety which are required for nurses to maintain safe work environment and safety climate.
3- Administrators must demonstrate positive responses to their nursing staff for reporting medication administration errors as a means to improve patient safety
4- Use a promising technology to reduce medication errors in hospital settings.
5- Hiring enough nursing staff.
6- The findings from this study pointed to the need to further investigation on how the hospital administration is addressing the problem of medication administration errors (MAEs) underreporting and the role of the unit nurse in quality management process.

Nurse Managers should:

1- Provide educational programs for improving and updating nurses' knowledge of medication safety and medication errors to monitor the effectiveness of treatment, and report adverse events.
2- Create incentives for nurses to report errors, and demonstrate positive responses for them when reporting medication errors.

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