International Journal of Healthcare Sciences ISSN 2348-5728 (Online)
Vol. 4, Issue 2, pp: (2122-2138), Month: October 2016 - March 2017, Available at: www.researchpublish.com

Assessment of Nurses' Knowledge and Practices Related to Patient Safety in Jeddah Eye Hospital

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Abstract: **Background: Patient safety is considered as important issue and fundamental to improve quality of care. Its improvement is considered a target goal for many current healthcare systems. However, knowledge of how improve patient safety is still growing and in recent years patient safety incidents have increased in Saudi Arabia. Aim of the Study: To assess nurses' knowledge and practices related to patient safety in Jeddah Eye Hospital (JEH). Design: A descriptive study. Setting: Male and Female wards in JEH. Study sample: The nurses who gave direct care to ophthalmic inpatients. Tools: Data collected through two methods which were developed by the researcher: 1) A structured questionnaire, 2) An observational checklist. Data were analyzed by SPSS version 20. Result: More than half (56.7 %) of the sample were aged 28-33 years, 96.7% were female, 60 % of the nurses had an experience in ophthalmic hospital between 1 to 5 years. Almost all of the nurses (93.3 %) had knowledge at an average level, but only 6.6% of the sample observed had a satisfactory level of practice. Conclusion & Recommendations: Nurses have adequate knowledge, but did not always apply their knowledge to practice regarding patient safety issues. There was no statistically significant relation between knowledge and practice among nurses in JEH (p-value = 0.818). Patient safety can be enhanced by promoting a safety culture in the organization, where nurses are free of undesirable feelings as well as the importance of available resources that are necessary for ensuring safety for patients. Most importantly, continuous staff education should be emphasized, developing a patient safety program and implementation and evaluation of such programs in practice.**

Keywords: **Nurses' knowledge, Patient safety practices, Ophthalmic patients.**

1. INTRODUCTION

Hatlie et al. (2008) defined patient safety as "a discipline in the healthcare sector that applies safety science methods toward the goal of achieving a trustworthy system of health care delivery. Patient safety is also an attribute of health care systems; it minimizes the incidence and impact of, and maximizes recovery from, adverse events" (Hatlie et al., 2008, 6). However the definition has changed, the concept of patient safety is same. Safer care is an intentional priority for health care organizations but carrying out the process is quite complex. Good planning, making the right choice for the right patient in the right situation, and learning from these events provides a realistic lens through which the safety and high quality of care can be viewed (Kelly, 2009).

At 2002, the National Patient Safety Goals (NPSGs) were established (Al-Qahtani and Messahel, 2013). The National Patient Safety Agency (NPSA) aimed to develop patient safety in the National Health Service (NHS) by minimizing risks (Lewis & Fletcher, 2005). Four key suggestions emerged to improve patient safety, these were the need to recognize the barriers to change; recognize the limited utility of "top down" models of application; to study policy context to find policy dimensions that support the patient safety agenda and form barriers; and the need to improve multidimensional methods to mobilize and insert "across the board" change, recognizing that there is a developing evidence base about which levers in what combination are most effective (Lewis & Fletcher, 2005).

Chaiken and Holmquest (2003) reported that review of patient safety can be maintained in three steps: identifying the risk; plan, application, and evaluation of safety practices; and monitor to ensure safe environment. The goals of the Joint Commission concerning patients' safety (2015) focused on: patient identification improvement, improving the effectiveness of caregivers' communication, safe usage of medications, reducing harms associated with clinical alarm systems, and reducing the risk of healthcare–associated infections. The hospital identifies safety risks (Joint Commission, 2015).

Safety problems are believed to start from unintentional errors and mistakes. Al Ahmadi (2010) reported that most adverse events and errors originated from a complex chain of events rather than just human error. Therefore, efforts should be taken to minimize such potential chains of events that might lead to injuries and may affect patient safety (Ahmadi, 2010). With an anticipated 850,000 patient safety incidents occurring in the National Health Service (NHS) in the UK annually, approximately one third exposed to disability or death and 50% of them may be preventable (Kelly, 2009). Therefore, improving patient safety is imperative and health care givers should be inspired to learn from both failures and successes in delivering healthcare (Kelly, 2009).

In Saudi Arabia, patient safety issues have received increasing attention in the last decades and there is a sufficient amount of pressure to improve patient safety within healthcare settings (Al Malki, Fitzgerald and Clark, 2011). Healthcare workers and policy makers frequently fight for patient safety improvement. Common aspects of safety to be emphasized among ophthalmic patients include correct patient identification, correct surgical site (left or right eye), prevention of falls and prevention of medication errors (Zakari, 2011). Although, many international studies were done about patients' falls and prevention strategies, such as the studies of (Kelly, (2009); Fortinsky et al., (2008), there are limited studies that report about Saudi Arabia, particularly about medication errors which occur commonly as done by Al Malki, Fitzgerald, and Clark (2011). Falls often occur in patients with eye disease due to visual disturbances. Numerous studies reported that the risk of falls increased with low visual acuity (Foss et al., 2006; Kelly and Astbury, 2006; Kelly, 2009; Harwood et al., 2005).

Ophthalmic patients have increased risks for hazards, therefore, promoting patient safety and providing high quality care in Jeddah Eye Hospital (JEH) is one of the major concerns of the researcher in this study (where the researcher has the opportunity to observe and assess nurses who provide direct care to ophthalmic patients). Delivering safe care to patients is the responsibility of all healthcare providers. Nurses have the major responsibility in implementing safety practices for patients who are vulnerable to accidents especially the elderly, due to visual impairment (Healey, 2010).

Nurses are responsible to assess high risk patients for aspects of safety such as falls, medication errors, identification errors, or wrong site surgery and to identify ways to prevent these adverse events (Stone et al., 2007). Studies of errors or accidents led to identifying the causes of these accidents, therefore, identifying methods to preventing such errors is essential so that nurses have adequate knowledge to minimize errors (Stone et al., 2007).

1.1- The research problem:

Due to increasing problem of medical errors, and escalating media attention and public pressure, health organizations have been applied more attention to address the quality of care and safety especially through ophthalmic patients.

In nursing, awareness about patient safety can be traced back to the 19th century with Nightingale reinforcing ideas of saving patients from injuries (Kangasniemi, 2013). To inhibit errors in nursing, patient safety requires appropriate health care facilities and health care providers' practices based on knowledge (Odom-Forren, 2007).

Some adverse events and clinical errors occur due to a high volume of patients having ophthalmic surgery and outpatient care, particularly in complex care environments with overarching performance and service demands (Kelly, 2009). In other word, patients who need ophthalmic surgery are at high risk of errors. Ophthalmic patients are usually liable to increased risks of surgery because they are commonly either elderly with associated medical conditions or young children. It is considered that systems, or organizational failures, cause many patient safety incidents that consequently lead to emotional, physical, and health economic effects.

Patient safety in KSA is an important issue that must be focused on because of the lack of research done on this topic, in addition to increased number of incidents as reported in local newspapers and observed daily by the researcher. Medication errors in Saudi Arabia commonly occur in prescribing forms. A recent study in the inpatient medical wards of a teaching hospital in Riyadh City, the investigators reviewed 2380 medication orders and identified 56 prescribing errors per 100 medication orders and the majority of these errors (79%) were classified as potentially harmful (Mahmoud,

Aljadhey, and Hassali , 2014). Another study were done in King Fahad University Hospital , Alkhobar, they found that 38 medication administration errors reported for the study period, the most common error was missed medication (Sadat-ali et al., 2010). There was a study done in King Abdul-Aziz University hospital , it was found that the highest incidence of falls (60 events) occurred in the medical unit (57.6%).While the highest incidence of falls (86 events) (82.69%) occurred between 5.00 am and 5.00 pm (Alsenany, 2010). Though many researches has been done about patient safety, the study of patient safety in ophthalmic patients in Saudi Arabia could not be found. Falls, medication errors, wrong site surgery, and patient identification errors are common patient safety issues that need to be focused on for ophthalmic patients.

The researcher in this study attempted to investigate the gaps between nurses' knowledge and practice while they are dealing with ophthalmic patients. Most literature that was written in S.A was about safety cultures but there were limited studies about assessment of nurses' knowledge and practices of patient safety in ophthalmic patients.

Malpractice is usually caused by system failures or from individual's error. Nurses are accountable for confirming patient safety within the multidisciplinary team in addition to reporting their own errors. Also nurses are accountable to identifying situations that could compromise patient safety (Kangasniemi et al., 2013). Kangasniemi (2013) also discussed the nurse managers' responsibilities that play a strategic role in patient safety in encouraging clinical nurses to consider values in the provision of care to patients. Nurses have to be encouraged to practice only competent safe care, the Nurse Managers are also responsible to identify the deficits in nurses' knowledge and skills that threaten patient safety and try to treat these gaps. (Kangasniemi et al., 2013).

1.2 – Aim of the study*:*

To assess nurses' knowledge and practices related to patient safety in Jeddah Eye Hospital.

1.3 – Study objectives:

1) To assess nurses' knowledge about patient safety issues at JEH.

2) To assess patient safety practices applied by nurses caring for ophthalmic patients.

1.4- Research questions:

1) What is the nurses' knowledge about patient safety issues?

2) Do nurses apply patient safety practices when caring for ophthalmic patient?

1.5- Operational definition of terms:

Nurses' knowledge**:** Nurses' previous ideas (background) about the principles of patient safety. In this study it will be measured by a questionnaire.

Patient safety practices: Any nursing activities or measures related to the implementation of International Patient Safety Goals that reduce the risk of adverse events due to exposure to medical care which include the following: correct patient identification, preventing medication errors, wrong site surgery, and falls. This will be measured by an observational checklist developed by the investigator.

Ophthalmic patient**:** Any patient admitted to the eye hospital or who visited the eye clinic for ophthalmic management.

2. RESULTS

TABLES:

TABLE 1. Frequency distribution of study nurses according to their demographic characteristics

Demographic Characteristics	**Study sample (n=30)**	
	No.	**%**
Gender Male	1	3.4
Female	29	96.7
Total	**30**	**100**
Age		
(22-27)	8	26.7

(28-33)	17	56.7
(34-39)	5	16.7
Total	**30**	**100**
Marital Status Single	19	63.3
Married	10	33.3
Widow	1	3.3
Total	**30**	**100**
Educational level Diploma(private)	12	40.0
Diploma (Health collage)	16	53.3
BSN	2	6.7
Total	**30**	**100**

TABLE 2. Frequency distribution of study sample according to their demographic characteristics

Demographic Characteristics	**Study sample (n=30)**	
	No.	**%**
Years of experience in nursing: Less than 1 year	5	16.7
1 to 5 years	21	70.0
6 to 10 years	3	10.0
16 to 20 years	1	3.3
Total	**30**	**100**
Experience in ophthalmic hospital: <1 year	10	33.3
1 to 5 years	18	60.0
6 to 10 years	2	6.7
<10 year	0	0
Total	**30**	**100**
Attendance of ophthalmic courses in the last 3 years: Yes	15	50.0
No	15	50.0
Total	**30**	**100**
Attended courses related to patient safety in the last 3 years: No	19	63.4
1- 2 courses	9	30.0
3- 4 courses	1	3.3
5- 6 courses	1	3.3
Total	**30**	**100**
Attendance of safety- specific courses within organization: Yes	6	20.0
No	24	80.0
Total	**30**	**100**

TABLE 3. Frequency distribution of the nurses' opinions about patient safety issues most likely to occur among ophthalmic patients

Statements	**Study sample (n=30)**							
	Never		**Rarely**		**Frequently**		**Usually**	
	No.	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
a. Patient Identification	2	6.7	15	**50.0**	5	16.7	8	26.7
b. Medication error	0	0.0	15	**50.0**	11	36.7	4	13.3
c. Patient falls	3	10.0	16	**53.3**	8	26.7	3	10.0
d. Wrong site surgery	12	40.0	11	**36.7**	4	13.3	3	10.0

e. Lack of communication	7	23.3	14	**46.7**	4	13.3	5	16.7
f. Infection (eye infection)	3	10.0	13	**43.3**	11	36.7	3	10.0

TABLE 4. Frequency distribution of the nurses' opinions about team members who were more likely to commit medical errors

Statements	**Study sample (n=30)**							
	Never		Rarely		Frequently		Usually	
	No.	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
a. Physician	0	0.0	19	63.3	9	30.0	2	6.7
b. Pharmacist	11	36.7	16	53.3	2	6.7	1	3.3
c. Nurses	1	3.3	15	50.0	11	36.7	3	10.0
d. Lab technician	0	0.0	9	30.0	16	53.3	5	16.7
e- Radiation technician	15	50.0	12	40.0	3	10.0	0	0.0

TABLE 5. Frequency distribution of the nurses 'opinions about factors most likely related to patient safety problems

Statements	**Study sample (n=30)**									
	Strongly disagree		**Disagree**		**Neither Agree nor Disagree**		**Agree**		**Strongly Agree**	
	No.	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
a. Work load	0	0.0	1	3.3	2	6.7	14	46.7	13	43.3
b. Shortage of nurses	0	0.0	0	0.0	3	10.0	15	50.0	12	40.0
c. Lack of policies	0	0.0	3	10.0	11	36.7	13	43.3	3	10.0
d. Lack of hospital design facilities (resources)	0	0.0	2	6.7	5	16.7	15	50.0	8	26.7
e. Lack of organizational support	0	0.0	3	10.0	5	16.7	16	53.3	6	20.0
f. Lack of experience of nursing staff	1	3.3	5	16.7	6	20.0	14	46.7	4	13.3

TABLE 6. Frequency distribution of the nurses' evaluations of the levels of patient safety at the hospital

Statement	**Study sample (n=30)**							
	Poor		Acceptable		Very Good		Excellent	
	No.	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
Grading patient safety in the hospital.	6	20.0	20	66.7	4	13.3	0	0.0

TABLE 7. Frequency distribution of the nurses' knowledge about fall prevention

Statements	**Study sample (n=30)**						**Total**
	Wrong answer		**Don't know**		**Correct answer**		
	No.	**%**	**No.**	**%**	**No.**	**%**	
A-The role of nurse to reduce the risk of fall							
1- Remove unnecessary equipment and furniture from the patient's surroundings.	0	0.0	0	0.0	30	100.0	30
2- Avoid medications that have potential side effects.	16	53.3	4	13.3	10	33.3	30
3- Involve the relatives to assist in patient's care.	1	3.3	2	6.7	27	90.0	30
4- Provide a commode at bedside (if appropriate).	8	26.7	3	10.0	19	63.3	30
5- Avoid leaving the patient unattended during diagnostic treatment.	2	6.7	2	6.7	26	86.7	30
B -The patient's fall assessment should be done.							
6- On admission and every shift	5	16.7	0	0.0	25	83.3	30
7- With high risk patient	1	3.3	0	0.0	29	96.7	30

Total score of knowledge = 40 Average $\geq$ 60% Below average $<$ 60 %

TABLE 8. Frequency distribution of the nurses' knowledge about correct patient identification

Statements	Study sample (n=30)					
	Wrong answer		Don't know		Correct answer	
	No.	%	No.	%	No.	%
C- The nurse should identify patients when administering medication, collect blood sample or other patient's care by the following						
8- Using room no.	16	53.3	0	0.0	14	46.7
9- Asking the patient about his / her name.	0	0.0	0	0.0	30	100.0
10- Checking the Medical Record No.	0	0.0	0	0.0	30	100.0
11- Checking the ID bracelet.	0	0.0	0	0.0	30	100.0
D- When delivering the patient's care the nurses use identifying methods through						
12- Using at least two identifying methods.	10	33.3	0	0.0	20	66.7
13- Using one identifying method is enough.	3	10.0	0	0.0	27	90.0
14- Using all identifying methods.	0	0.0	0	0.0	30	100.0

Total score of knowledge = 40 Average ≥ 60% Below average < 60 %

TABLE 9. Frequency distribution of the nurses' knowledge about correct identification of the surgical site

Statements	Study sample (n=30)					
	Wrong answer		Don't know		Correct answer	
	No.	%	No.	%	No.	%
E- Identify the operative site by:						
15- Using an indelible pen to mark above the operated eye.	7	23.3	2	6.7	21	70.0
16- Placing a tape above the operated eye.	6	20.0	2	6.7	22	73.3
17- Placing the ID bracelet on the same site of operated eye.	7	23.3	0	0.0	23	76.7
18- Asking the patient about his / her site of surgery.	7	23.3	0	0.0	23	76.7
F- The person / people responsible (s) for marking the surgical site is / are:						
19- Anesthesiologist.	5	16.7	1	3.3	24	80.0
20- surgeon or deputy nurse.	6	20.0	1	3.3	23	76.7
21- Physician only.	26	86.7	0	0.0	4	13.3
22- Nurse only.	0	0.0	0	0.0	30	100.0
G- The wrong site surgery risk factor(s) is/are:						
23- Lack of communication among surgical team members.	3	10.0	1	3.3	26	86.7
24- Lack of uniform marking method.	6	20.0	0	0.0	24	80.0
25- Lack of preoperative checklist.	8	26.7	0	0.0	22	73.3
26- Lack of communication between surgical team and patient and family.	11	36.7	2	6.7	17	56.7

Total score of knowledge = 40 Average ≥ 60% Below average < 60 %

TABLE 10. Frequency distribution of the nurses' knowledge about medication error prevention

Statements	Study sample (n=30)					
	Wrong answer		Don't know		Correct answer	
	No.	%	No.	%	No.	%
H- In case of unlabeled medication / solution /drops, the nurse should:						
27- Immediately discard it.	4	13.3	0	0.0	26	86.7
28-Identify the medication by its color & shape.	6	20.0	0	0.0	24	80.0
29- Ask the pharmacist about its name.	25	83.3	0	0.0	5	16.7
30- Ask the head nurse about its name.	19	63.3	0	0.0	11	36.7

I- Before instilling suspensions drops, the nurse follow this instructions:						
31- Check only the trade name of the drug.	11	36.7	0	0.0	19	63.3
32- Shake it well before instilling the drop.	0	0.0	0	0.0	30	100.0
J- When instilling pupil dilating drops the nurse should do the following:						
33-Check the vision of patient before instilling the drops.	14	46.7	1	3.3	15	50.0
34-Educate him/her to avoid driving till the effect is resolved.	1	3.3	0	0.0	29	96.7
35-Do punctal occlusion or (close the eyes) for 5 minutes after instilling the drops.	29	96.7	0	0.0	1	3.3
K -When you administer an intravenous antibiotic drug , after few hours the patient complains of itching , skin rash and diarrhea what is the correct action you will do:						
36- Decrease the dose of the medication.	4	13.3	0	0.0	26	86.7
37- Discontinue the medication & inform the physician.	0	0.0	0	0.0	30	100.0
38- Check the vital signs immediately.	0	0.0	0	0.0	30	100.0
L- Element contributing to medication errors is / are:						
39- Personal neglect.	5	16.7	0	0.0	25	83.3
40- Unclear doctor's prescription.	2	6.7	0	0.0	28	93.3

Total score of knowledge = 40 Average ≥ 60% Below average < 60 %

TABLE 11. Frequency distribution of the nurses' practice in relation to correct patient identification

Statements	**Study sample , n=30**					
	Not done		**Not observed**		**Done**	
	No.	**%**	**No.**	**%**	**No.**	**%**
1- Use at least two patient identifiers when providing care, treatment, and services.	2	6.7	0	0.0	28	93.3
2- Use two patient identifiers when administering medications	3	10.0	0	0.0	27	90.0
3- Use two patient identifiers when collecting blood samples and other specimens for clinical testing.	1	3.3	22	73.3	7	23.3
4- Use two patient identifiers when providing other treatments or procedures.	26	86.7	1	3.3	3	10.0
5- Avoid using the patient's room number or physical location as an identifier.	28	93.3	0	0.0	2	6.7
6- Containers used for blood and other specimens are labeled in the presence of the patient.	1	3.3	19	63.3	10	33.3

Total practice score= 45 Satisfactory ≥ 70 % Unsatisfactory < 70 %

TABLE 12. Frequency distribution of the nurses' practice in relation to correct identification of surgical site

Statements	**Study sample (n=30)**					
	Not done		**Not observed**		**Done**	
	No.	**%**	**No.**	**%**	**No.**	**%**
1- Check the patient's identity.	0	0.0	0	0.0	30	100
2- Use pre-op checklist	0	0.0	0	0.0	30	100
3- Mark the intended site with an arrow using an indelible pen and using two identifiers.	23	76.7	7	23.3	0	0.0
4- Involving the patient in the process of marking and using two identifiers.	23	76.7	7	23.3	0	0.0
5- Check reliable documentation and/or images to ascertain intended surgical site.	1	3.3	0	0.0	29	96.7
6- Confirm the site of surgery against the patient's supporting documentation.	17	56.7	9	30.0	4	13.0

Total practice score= 45 Satisfactory ≥ 70 % Unsatisfactory < 70 %

TABLE 13. Frequency distribution of the nurses' practice in relation to medication error prevention

Statements	Study sample (n=30)					
	Not done		Not observed		Done	
	No.	%	No.	%	No.	%
1- Check the ten rights about administration of medication						
Right patient	0	0.0	0	0.0	30	100.0
Right drug	0	0.0	0	0.0	30	100.0
Right dose	0	0.0	0	0.0	30	100.0
Right route	1	3.3	0	0.0	29	96.7
Right time	14	46.7	1	3.3	15	50.0
Right documentation	18	60.0	1	3.3	11	36.7
Right client education	19	63.3	4	13.3	7	23.3
Right to refuse	0	0.0	26	86.7	4	13.3
Right assessment	16	53.3	12	40.0	2	6.7
Right evaluation	15	50.0	11	36.7	4	13.3
2- Double check all medication or solution labels by two nurses for verifying verbally and visually	29	96.7	0	0.0	1	3.3
3- Keep the sterilization of the eye drops through avoiding its contact with the eye.	2	6.7	0	0.0	28	93.3
4- Shake the suspension drops well before instilling them.	17	56.7	0	0.0	13	43.3
5- Asking the patient to close his eyes or do punctual occlusion for at least one minute.	21	70.0	0	0.0	9	30.3
6- On discharge :						
Review Dr.'s order.	0	0.0	1	3.3	29	96.7
Educate the patient about use of medications	0	0.0	1	3.3	29	96.7
Follow post-op precautions.	0	0.0	1	3.3	29	96.7

Total practice score= 45 Satisfactory ≥ 70 % Unsatisfactory < 70 %

TABLE 14. Frequency distribution of the nurses' practice in relation to fall prevention

Statements	Study sample (n=30)					
	Not done		Not observed		Done	
	No.	%	No.	%	No.	%
A-Communication: 1- Do the patient's fall assessment on admission and during every shift.	30	100.0	0	0.0	0	0.0
2- Orient the patient to surroundings & hospital routines, point out location of the bathroom	25	83.3	1	3.3	4	13.3
3- Use ambulatory aids with high-risk patients when moving.	0	0.0	12	40.0	18	60.0
4- Keep call light in easy reach	30	100	0	0.0	0	0.0
B - **Medications:** 5-Identify medications for potential side effects.	21	70.0	4	13.3	5	16.7
9- Assess level of consciousness.	3	10.0	1	3.3	26	86.7
C- **Environment :** 6- Place the bed in low position and lock the brakes.	9	30.0	0	00.0	21	70.0
D- **Safety:** 7- Consider patient safety alarm.	30	100.0	0	0.0	0	0.0
8- Consider placing the high-risk patient in a room near the nursing station, for close observation, especially for the first 24–48 hours of admission.	29	96.7	1	3.3	0	00.0

Total practice score = 45 Satisfactory ≥ 70 % Unsatisfactory < 70 %

Figures:

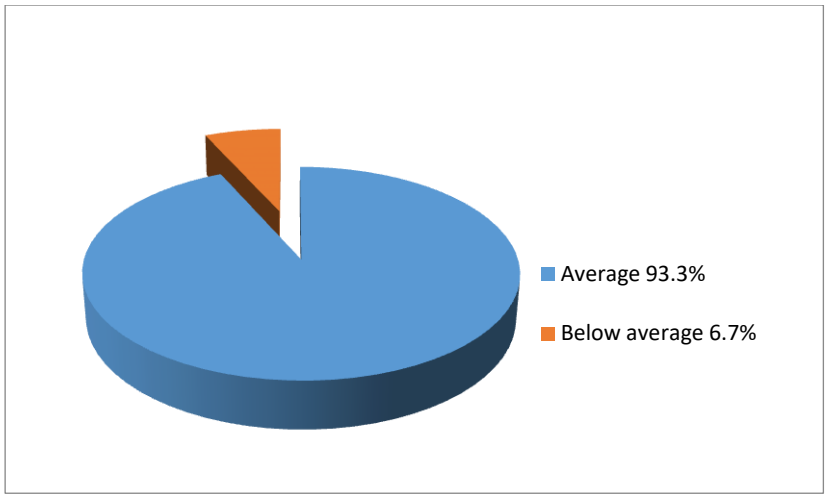

Figure 1. Frequency distribution of the nurses' score in knowledge

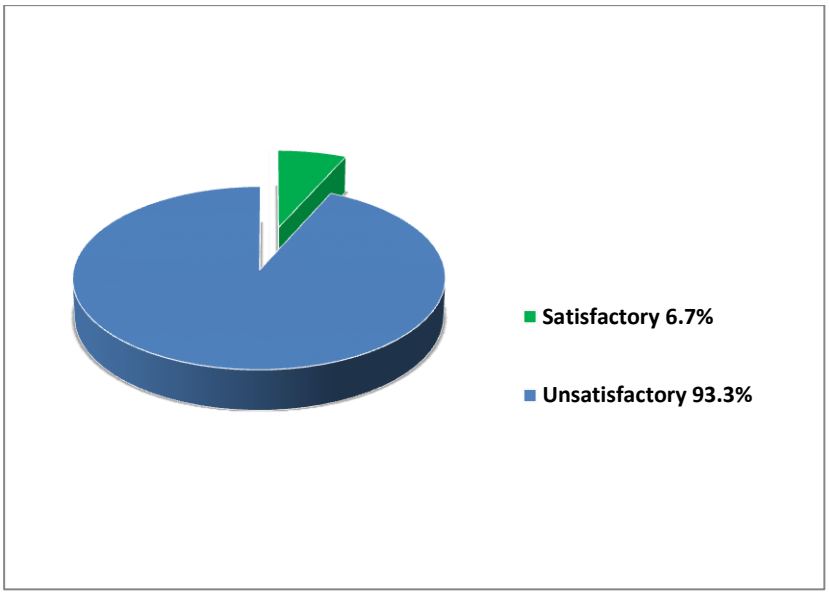

Figure 2. Frequency distribution of the Nurses' Score in practice

3. CONCLUSION

Findings in this study showed that nurses had adequate knowledge but they did not apply that knowledge to practice with their ophthalmic patients. There was statistically significant differences between the mean score of knowledge and practice of the nurses, but there was no statistically significant relation between knowledge and practice. There was no statistically significant difference between the mean score of nurses' knowledge and practice related to different classes of age, different educational level, and different years of experience.

ACKNOWLEDGMENT

First and foremost I thank ALLAH on achieving this success and offer special appreciation to my family for their support. I owe sincere gratitude and particular thanks to my supervisors Dr. Hasnah Banjar, Assistant Professor in Nursing Administration; Dr. Amani Safwat., Associate Professor in Medical Surgical Nursing; and Dr. Nahed Morsy, Associate Professor in Psychiatric and Mental Health Nursing who have supported me throughout my studies with their patience, enlightening comments and valuable guidance.

I am deeply indebted to them; they embraced every responsibility of a principal supervisor to guide my project.

Moreover, I would like to present my special thanks to the Faculty of Nursing committee for their greatest effort, cooperation and willingness to give me support and knowledge.

I could not complete this acknowledgement without thanking the Jeddah Eye Hospital administration who made it possible for me to collect data under the guidance of the administration.

Finally, I really enjoyed and benefited from this course and achieved the outcome that I always hoped to achieve.

REFERENCES

[1] Abdou, H. & Saber, K.M. (2011). A Baseline Assessment of Patient Safety Culture among Nurses at Student University Hospital. World Journal of Medical Sciences, 6 (1), 17-26.

[2] Aboshaiqah, A.E., & Baker, O.G. (2013). Assessment of nurses' perceptions of patient safety culture in a Saudi Arabia hospital. Journal of Nursing Care Quality, 28(3), 272–80.

[3] Adams, R.J., Tucker, G., Price, K., (2009). Self-reported adverse events in health care that cause harm: a population-based survey. Med J Aust.;190,484-488.

[4] Al-Ahmadi, H.A. (2010). Assessment of patient safety culture in Saudi Arabian hospitals. Quality & safety in health care; 19(5), e17.

[5] Al-Ahmadi, T. A. (2009). Measuring patient safety culture in Riyadh's hospitals: a comparison between public and private hospitals. J Egypt Public Health Association, 84(5–6),479-500.

[6] Alexis, O., & Caldwell, J. (2013). Administration of medicines - the nurse role in ensuring patient safety. British Journal of Nursing (Mark Allen Publishing), 22(1), 32–5. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/23299209

[7] Almalki, M., Fitzgerald, G., & Clark, M. (2011). Health care system in Saudi Arabia: an overview. East Mediterr Health J.;17(10),784-93.

[8] Al-Qahtani, A.S., & Messahel, F.M (2013). Nurse's role in Implementing Principles of Quality & Patient Safety. 1st Edition. Executive Board of the Health Ministers' Council for Cooperation Council States.

[9] Alsenany, S. (2010), Prevention of patient falls in University Hospital, (1997), 0–3.

[10] Amador, L.F., & Loera, J.A. (2006). Preventing postoperative falls in the older adult. Journal of American College of Surgeons, 204(3), 447-453.

[11] Aronson, J.K. (2010). Medication errors, in Side Effects of Drugs, Annual 32, Elsevier, 903-922 .

[12] Aspden, P., Corrigan, J., Wolcott, J., et al., (2004). Patient safety: achieving a new standard for care. Washington, DC: National Academies Press.

[13] Attarian, D. (2008). What is a preventable adverse event?. American Academy of Orthopaedic Surgeons. Available from: http://www.aaos.org/news/aaosnow/may08/managing6.asp

[14] Ball, M.J., & Douglas, J.V. (2009). Redefining and improving patient safety. Methods Inf Med.;41(4),271-6.

[15] Ballard, K. (2003). Patient Safety: A Shared Responsibility. Online Journal of Issues in Nursing, 8 (3), Manuscript4.Available:www.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Volume82003/No3Sept2003/PatientSafety.aspx.

[16] Bates, D. (2007). Preventing medication errors: a summary. American Journal of Health-System Pharmacy; 64(14) (Suppl 9 S3-S9).

[17] Blegen, M., Gearhart, S., O'Brien, R., Sehgal, N., & Alldredge, B. (2009). AHRQ's Hospital survey on patient safety culture: psychometric analyses. J Patient Saf, 5,139-144.

[18] Bodur, S., &Filiz, E., (2009). A survey on patient safety culture in primary healthcare services in Turkey. Int J Qual Health Care, 21,348-355.

[19] Boote, N., & Beile, P. (2005). Scholars Before Researchers: On the Centrality of the Dissertation Literature Review in Research Preparation. Educational Researcher, 34 (6), 3-15.

[20] Burroughs, T.E., Waterman, A.D., Gallagher, T.H., et al. (2007). Patients' concerns about medical errors during hospitalization. J Comm J Qual Patient Saf; 33,5-14.

[21] Carolyn, M., & Clancy, M.D. (2005). Focus on Patient Safety: Patient Safety in Nursing Practice. Journal of Nursing Care Quality, 20(3), 193-197.

[22] Canadian Spinal Research Organization, 2015, http://www.csro.com/research/about-research/types-of-research/.

[23] Saudi Central Board of Accreditation for Healthcare Institutions, 2015, http://www.cbahi.gov.sa/apps/en/home.aspx.

[24] Chaiken, B.P., & Holmquest, D.L. (2003).Patient Safety: Modifying Processes to Eliminate Medical Errors. Nursing Outlook, 51 (3), S21-S24.

[25] Choo, J., Hutchinson, A., & Bucknall, T. (2010). Nurses' role in medication safety. Journal of nursing management, 18(7), 853–61.

[26] Committee on Data Standards for Patient Safety. Patient safety: Achieving a new standard for care. Institute of Medicine; (2003).

[27] Commission, T. J. (2015). National Patient Safety Goals Effective January 1 , 2015, 1–17.

[28] Cohen, M. (2001). Patient safety alert: "high-alert" medications and patient safety. Int J Qual Health Care;13:339-40.

[29] Considine, J., & Botti, M. (2004). Who, when and where? Identification of patients at risk of an in-hospital adverse event: implications for nursing practice. Int J Nurs Pract.;10(1):21-31.

[30] Currie, L. (2010). Chapter 10. Fall and Injury Prevention Fall and Fall-Related Injury Reporting.

[31] Dattilo, E., & Constantino, R.E. (2006). Root Cause Analysis and Nursing Management Responsibilities in Wrong-Site Surgery. Dimensions of Critical Care Nursing, 25(5),221-225.

[32] Davey, A., Britland, A., &Naylor, R. (2008) Decreasing pediatric prescribing errors in a district general hospital. Qual Saf Health Care; 17(2): 146-149.

[33] Drach-Zahavy, A., & Pud, D. (2010). Learning mechanisms to limit medication administration errors. Journal of advanced nursing, 66(4),794–805.

[34] Edwards, P. (2008). Ensuring correct site surgery. Journal of perioperative practice, 18(4), 168–71. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/18578393

[35] El-Jardali, F., Sheikh, F., Garcia, NA., Jamal, D.,& Abdo, A. (2014).Patient safety culture in a large teaching hospital in Riyadh: baseline assessment, comparative analysis and opportunities for improvement. BMC Health Services Research, 14,122.

[36] Elliott, M., & Liu, Y. (2010). The nine rights of medication administration: an overview, British Journal of Nursing; 9(5), 300-305.

[37] Eisenhauer, L., Hurley, A., &Dolan, N. (2007) Nurses' reported thinking during medication administration. Journal of Nursing Scholarship; 39(1):82-87. http://www.rubbermaidhealthcare.com/about/ pages/ news/ details.aspx? NewsID=131#sthash.nmpxzSvW.dpuf

[38] ElGhrably, I., & Fraser, S.G. (2008). An observational study of laterality errors in a sample of clinical records. Eye, 340-343.

[39] Foss, A.J., Harwood, R.H., Osborn, F., Gregson R.M., Zaman, A., & Masud, T. (2006). Falls and health status in elderly women following second eye cataract surgery: a randomised controlled trial. Age and Ageing,35(1):66-71.

[40] Fortinsky, R.H., Baker, D., Gottschalk, M., King, M., Trella, P., & Tinetti, M.E. (2008). Extent of Implementation of Evidence-Based Fall Prevention Practices for Older Patients in Home Health Care. American Geriatric Society, 56 (4),737-743.

[41] Fraser, S.G., & Adams, W. (2006). Wrong site surgery. Br J Ophthalmology, 90, 814–816.

[42] Graham, B.C. (2012).Examining evidence-based interventions to prevent inpatient falls. Medsurg Nurs.; 21(5):267-70.

[43] Harwood, R.H., Foss, A.J.E, Osborn, F., Gregson, R.M., Zaman, A., & Masud, T. (2005). Falls and health status in elderly women following first eye cataract surgery. British Journal of Ophthalmology,3,53-59.

[44] Hatlie, M.J., Emanuel, L., Berwick, D., & Conway, J. (2008). What exactly is patient safety? In I. H. K. et al (eds) (Ed.), Advances in Patient Safety: New Directions and Alternative Approaches (Vol. 1, pp. 19–38). Agency for Health Research and Quality.

[45] doi:http://www.ahrq.gov/downloads/pub/advances2/vol1/advances-emanuel-berwick_110.pdf

[46] Healey, F. (2010). A guide on How To Prevent Fall and Injury in Hospitals, Nursing older people, 22 (9), 16-22.

[47] Heaton, C. (2012). Creating a protocol to reduce inpatient falls. Nursing Times, 108(12),16-18.

[48] Henneman, E. a, Gawlinski, A., &Giuliano, K. K. (2012). Surveillance: A strategy for improving patient safety in acute and critical care units. Critical care nurse, 32(2), e9–18.

[49] Hill, K. (2010). Improving Quality and Patient Safety by Retaining Nursing Expertise. The Online Journal of Issues in Nursing,15(3), 102-111.

[50] Hill, K.D., Vu, M., & Walsh, W. (2007). Falls in the acute hospital setting-impact on resource utilization. Australian Health Review, 31(3), 471-477.

[51] Houser, J. (2011). Nursing Research: Reading, Using, and Creating Evidence. (2nd ed.). Jones & Bartlett Learning.

[52] Hughes, R.G., & Blegen, M.A. (2007). Chapter 37. Medication Administration Safety.

[53] Hughes, R.G. (2008). Patient Safety and Quality. An Evidence-Based Handbook for Nurses. Rockville (MD): Agency for Healthcare Research and Quality (US).

[54] Institute of Medicine. Preventing medication errors. Washington, DC: National Academy Press, 2007.

[55] Institute for Safe Medication Practices, 2014, (www.ismp.org).

[56] Joint Commission National Patient Safety Goals (2012)., 12(1), 1-4. Available from: http://www.jointcommission.org/standards_information/npsgs.aspx.

[57] Joint Commission on Accreditation of Healthcare Organizations (JCAHO) (2005). Available from:http://www.jointcommission.org/about_us/about_the_joint_commission_main.aspx.

[58] Commission, T. J. (2015). National Patient Safety Goals Effective January 1 , 2015, 1–17.

[59] Joshi, M.C., Joshi, H.S., Tariq, K., Ejaj, A., Prayag, S., &Raju, A. (2007) A prospective study of medication errors arising out of look-alike and sound-alike brand names confusion. International Journal of Risk and Safety in Medicine, 19, 4, 195-201.

[60] Judge, T.A., Bono, J.E., Ilies, R., &Gerhardt, M.W. (2002). Personality and leadership: a qualitative and quantitative review. J Appl Psychol.;87(4):765-80.

[61] Kangasniemi, M., Vaismoradi, M., Jasper, M., & Turunen, H. (2013). Ethical issues in patient safety: Implications for nursing management. Nursing Ethics,20(8),904-916.

[62] Karen, B. (2002). Reducing patient falls project. Mid Yorkshire Hospitals NHS Trust. Available from:https://legacy.premierinc.com/quality-safety/tools-services/safety/topics/falls/downloads/E-14-falls-project-uk.pdf.

[63] Karen B. Pearson, MLIS, MA and Andrew F. Coburn (2012) ,Evidence-based Falls Prevention in Critical Access Hospitals.

[64] Kelly, S. P., & Jalil, a. (2011). Wrong intraocular lens implant; learning from reported patient safety incidents. Eye (London, England), 25(6), 730–4. doi:10.1038/eye.2011.22

[65] Kelly, SP. (2009). Guidance on patient safety in ophthalmology from the Royal College of Ophthalmologists, Eye, 2143-2151.

[66] Kelly, S.P., & Astbury, N.J. (2006). Patient safety in cataract surgery. Eye (Lond), 20(3),275-82.

[67] Kenrick, D. (2010). Rebuilding Maslow's pyramid on an evolutionary foundation. psychologytoday.com.

[68] Khoja , T. A. (2008).Glossary of Health Care Quality "Interpretations of Terms". (2nd ed.).

[69] Kohn, L.T., Corrigan, J.M., &Donaldson, M.S., (2000). To err is human: building a safer health system. A report of the Committee on Quality of Health Care in America, Institute of Medicine. Washington, DC: National Academy Press. Available from: http://www.csen.com/err.pdf

[70] Kozer, E., Scolnik, D., Macpherson, A., Rauchwerger, D., & Koren, G. (2006). The effect of a short tutorial on the incidence of prescribing errors in pediatric emergency care. Can J Clin Pharmacology,13(3),e285-291.

[71] Kumar, R. (2006). Research Methodology a step-by-step guide for beginners. (2nded.).London: Sage Publications.

[72] Kerr, N. M., Patel, H. Y., Chew, S. S., Ali, N. Q., Eady, E. K. & Danesh-Meyer, H.V. (2013), Patient satisfaction with topical ocular hypotensives. Clinical & Experimental Ophthalmology, 41: 27–35.

[73] Krauss, M.J., Nguyen, S.L., Dunagan, W.C., Birge, S., Costantinou, E., Johnson, S., &Fraser, V. (2007). Circumstances of patient falls and injuries in 9hospitals in a midwestern healthcare system. Infection Control and Hospital Epidemiology, 28(5), 544-550.

[74] Lee, W., Wung, H., Liao, H., et al., 2010. Hospital Safety Culture in Taiwan: A Nationwide Survey. Using Chinese Version Safety Attitude Questionnaire. Health Services Research, 10:234.

[75] Lewis, R.Q. (2004). Implementing a national strategy for patient safety, Qual Saf Health Care,135-139, retrieved from //http://qualitysafety.bmj.com/content/14/2/135.full.

[76] Lewis, R. Q., & Fletcher, M. (2005). Implementing a national strategy for patient safety: lessons from the National Health Service in England. Quality & safety in health care, 14(2), 135–9. doi:10.1136/qshc.2004.011882

[77] Lord, S.R. (2006).Visual risk factors for falls in older people. Age and Ageing,35-S2.

[78] Mahmoud, M., Aljadhey, H., and Hassali , M. (2014), Prescribing errors incidence in hospitalized Saudi patients: Methodology considerations, vol. 22: 388-389.

[79] Mannos, D. (2003). NCPS patient misidentification study: a summary of root cause analyses. VA NCPS Topics in Patient Safety. Washington, DC, United States Department of Veterans Affairs, June–July 2003 (http://www.va.gov/ncps/TIPS/Docs/TIPS_Jul03.doc, accessed 11 June 2006)

[80] Marck, P.B. (2006). Discourse. Field notes from research and restoration in the backcountry of modern health care. Canadian Journal of Nursing Research Focus on Safety and Risk, 38(2), 11–23.

[81] Miake-lye, I. M., Hempel, S., Ganz, D. A., & Shekelle, P. G. (2012). Annals of Internal Medicine Inpatient Fall Prevention Programs as a Patient Safety Strategy.

[82] Miake-Lye, I.M., Hempel, S., Ganz, D.A., & Shekelle, P.G. (2013). Inpatient fall prevention programs as a patient safety strategy: a systematic review. Ann Intern Medicine, 158(5Pt2),390-396.

[83] Michaels, R.K., Makary, M.A., Dahab, Y., Frassica, F.J., Heitmiller, E., Rowen, L. C., & Pronovost, P.J. (2007). Achieving the National Quality Forum's "Never Events": prevention of wrong site, wrong procedure, and wrong patient operations. Annals of Surgery, 245(4), 526–532.

[84] Milligan, F.J. (2007). Establishing a culture for patient safety - the role of education. Nurse Education Today, 27(2), 95-102.

[85] Ministry of health portal, 2015, http://www.moh.gov.sa/en/Ministry/MediaCenter/Ads/Pages/ads-2012-09-03-001.aspx

[86] Morello, RT., Lowthian, JA., Barker, AL., McGinnes, R., Dunt, D., & Brand, C. (2013). Strategies for improving patient safety culture in hospitals: a systematic review. BMJ Qual Saf.;22(1):11-18.

[87] Mwachofi, A., SL, W., & BA, A.-O. (2011). Factors affecting nurses' perceptions of patient safety. International journal of health care quality assurance, 24(4), 274–283. Retrieved from http://aithon.ngcsn.net/netacgi/getref2.pl?ref=P-21938973.

[88] Neily, J. Mills, P. D. Eldridge N. et al. (2011). Incorrect surgical procedures within and outside of the operating room: a follow-up report. Archives of Surgery, 146(1):1235–1239.

[89] Nelson, A., Powell-Cope, G., Gavin- Dreschnack, D., Quigley, P, Bulat, T, Baptiste, A.S & Friedman, Y (2004). Technology to promote safe mobility in the elderly. Nursing Clinics of North America, 39, 649-67.

[90] Newell, R., & Burnard, P. (2011). Research for Evidence-Based Practice in Healthcare. (2nd ed.). Blackwell Publishing, New York.

[91] Odom-Forren, J. (2007). Patient safety: nursing priority. J Peri anesth Nursing; 22(6): 446-448.

[92] Oliver, D., Healey, F., & Haines, T.P.(2010). Preventing falls and fall-related injuries in hospitals. Clinics in Geriatric Medicine, 26(4), 645-692.

[93] Ory, M.G., Smith, M.L., Wade, A.F., Wright, J.C., & Parrish, R. (2007). Addressing Falls in Texas : Evidence-Based Fall Prevention Programming for Older Texans. Capital Area Council of Governments, 62(1).

[94] Oyebode, F. (2013). Clinical errors and medical negligence. Advances in Psychiatric Treatment, 12,221-227.

[95] Page, A., (2004). Keeping patients safe: Transforming the work environment of nurses. Washington, DC: National Academies Press.

[96] Parhoo, K. (2006). Nursing Research: Principles, Process and Issues, (2nd ed). Palgrave Macmillan, Houndsmill.

[97] Pearson, K.B., & Coburn, A.F. (2011). Evidence-based Falls Prevention in Critical Access Hospitals, policy briefs # 24.

[98] Pikkel, D., Sharabi-Nov, A., & Pikkel, J. (2014). It is the left eye, right?. Risk Management and Healthcare Policy, 777–780.

[99] Pinnock, D. (2012). The role of the ward manager in promoting patient safety. Br J Nurs., 21(19), 1144–1150.

[100] Polit, D.F. & Beck C.T. (2011). Essentials of Nursing Research: Appraising Evidence for Nursing Practice. 7th edition. Wolters Kluwer Health / Lippincott Williams & Wilkins, Philadelphia.

[101] Polit, D.T., & Beck, C. (2014). Essentials of nursing research: appraising evidence for nursing practice. 8th edition, Wolters Kluwer Lippincott Williams & Wilkins, Philadelphia.

[102] Polit, D.T., & Beck, C. (2013). Essentials of nursing research: appraising evidence for nursing practice. 8th edition, Wolters Kluwer Lippincott Williams & Wilkins, Philadelphia.

[103] Polit, D.F. Beck, C.T., & Hungler, B.P (2001). Essentials of nursing research: Methods, appraisal, and utilization. 5th ed. Lippincott, Philadilphia.

[104] Poon, E.G., Keohane, C.A., Yoon, C.S., Ditmore, M., Bane, A., Levtzion-Korach, O., Moniz, T. et al., (2010). Effect of bar-code technology on the safety of medication administration. N Engl J Med.,362(18),1698-1707.

[105] Ravindran, R.D., Lalitha, P., Haripriya, A., & Venkatesh, R. (2009). The Necessary Steps for Endophthalmitis Prophylaxis. Cataract and refractive surgery Today, 106-108.

[106] Raju, T.N., Kecskes, S., Thorton, J.P., et al. (1989). Medication errors in neonatal and paediatric intensive care units. Lancet; 2:374-6.

[107] Rhodes, P., Giles, S.J., Cook, G.A., Grange, A., Hayton, R., Maxwell, M.J., Sheldon, T.A., &Wright, J. (2008) Assessment of the implementation of a national patient safety alert to reduce wrong site surgery. Qual Saf Health Care, 17(6):409-415.

[108] Rubin, G., George, A., Chinn, D., & Richardson, C. (2003). Errors in general practice: development of an error classification and pilot study of a method for detecting errors. Qual Saf Health Care; 12(6): 443–447.

[109] Sadat-ali, M., Al-shafei, B. A., Al-turki, R. A., & Ahmed, S. E. (2010). Medication administration errors in Eastern Saudi Arabia, 966(July), 1257–1259.

[110] Sammer, C.E., Lykens, K., Singh, K.P., Mains, D.A., &Lackan, N.A. (2010). What is patient safety culture? A review of the literature. Journal of Nursing Scholarship : an Official Publication of Sigma Theta Tau International Honor Society of Nursing / Sigma Theta Tau, 42(2), 156–165.

[111] Sammer, C.E., & James, B.R. (2011). Patient safety culture: the nursing unit leader's role. Online J Issues Nurs.;16(3):3.

[112] Saudi Central Board for Accreditation of healthcare Institutions (2015).

[113] Saul McLeod, 2014 ,http://www.simplypsychology.org/sampling.html

[114] Sayed, H.A., Zayed, M., El Qareh, N.M., Khafagy, H., Helmy, A.H., & Soliman, M. (2013). Patient safety in the operating room at a governmental hospital. Journal of Egypt Public Health Association, 88(2):85–89.

[115] Schwenk, M., Lauenroth, A., Stock, C., Moreno, R.R., Oster, P., McHugh, G., et al. . (2012). Definitions and methods of measuring and reporting on injurious falls in randomised controlled fall prevention trials: a systematic review. BMC Med Res Methodol;12:50.

[116] Services, H., & Hughes, R. G. (2008). Patient Safety and Quality : An Evidence-Based Handbook for Nurses, (08).

[117] Sevdalis, N., Norris, B., Ranger, C., & Bothwell, S. (2009). Designing evidence-based patient safety interventions: the case of the UK's National Health Service hospital wristbands. J Eval Clin Pract.;15(2):316-22.

[118] Site, W., & Person, W. (2006). Best practices for preventing wrong site, wrong person, and wrong procedure errors in perioperative settings. AORN journal, 84 (Suppl 1), S13–29. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/16892939.

[119] Sheet, F. (2013). The Impact of Education on Nursing Practice, (202).

[120] Shelby, D.M. (2014). Knowledge, Attitudes, and Practice of Primary Care Nurse Practitioners Regarding Skin Cancer Assessments: Validity and Reliability of a New Instrument. Unpublished PhD thesis, College of Nursing University of South Florida. Retrieved from: http://scholarcommons.usf.edu/cgi/viewcontent.cgi?article=6320&context=etd.

[121] Sheu, S.J., Wei, I.L., Chen, C.H., Yu, S., Tang, F.I. (2009). Using snowball sampling method with nurses to understand medication administration errors. Journal of Clinical Nursing. 18(4), 559-569.

[122] Sherman, H., Castro, G.& Fletcher, M. (2009). Towards an international classification for patient safety: the conceptual framework. Int J Qual Health Care; 21(1),2–8.

[123] Simon, J.W. (2007). Preventing surgical confusions in ophthalmology (an American Ophthalmological Society thesis). Trans Am Ophthalmology;105:513–529.

[124] Singh, Y.K. (2006). Fundamental of research methodology and statistics. New Age International (P) Ltd., Publishers, New Delhi.

[125] Stelfox, H. Th., Bates, D., & Redelmeier, D.A. (2003). Safety of patients isolated for infection control. American Medical Association, 290(14),1899-1905.

[126] Stone, P.W., Mooney-Kane, C., Larson E.L., Horan, T., Glance, L.G., Zwanziger, J., &Dick, A.W. (2007). Nurse working conditions and patient safety outcomes. Medical Care, 45(6),571-578.

[127] Tang, F.I., Sheu, S.J., Yu, S., Wei, I.L., Chen, C.H. (2007) Nurses relate the contributing factors involved in medication errors. Journal of Clinical Nursing. 16, 3, 447-457

[128] Tappen, R. (2011). Advanced Nursing Research: From theory to Practice. 4th Edition. Jones & Bartlett Publishers, London.

[129] The Joint Commission, (2014). National Patient Safety Goals, 1-16.

[130] The National Patient Safety Agency (NPSA) (2007). Preventing medication errors and improving patient safety. 103(15), 21. Available from: http://www.nursingtimes.net/preventing-medication-errors-and-improving-patient-safety/201866.article

[131] The National Patient Safety Agency (NPSA) (2012). National Patient Safety Agency Annual Report and Accounts 2011/12. Available from: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/212910/NPSA-Annual-Report-and-Accounts-2011-12-020812.pdf

[132] Thomas, S., & Foundation, N. H. S. (2015). Advice after receiving your dilation eye drops, 1979(August), 7188.

[133] Timmins, F., & McCabe, C. (2005). How to conduct an effective literature review. Nursing Standard, 20(11),41-47.

[134] Tyebkhan, G. (2003). Declaration of Helsinki: The ethical cornerstone of human clinical research .Indian J Dermatol Venereol Leprol, 69,245-247.

[135] Tzeng, H., & Yin, C. (2008). Nurses' Solutions to Prevent Inpatient Falls in Hospital Patient Rooms. Nurs Economic; 26(3):179-187.

[136] Tzeng, H., & Yin, C., (2013). Schneider T. Medication Error-Related Issues In Nursing Practice. MedSurg Nursing;22(1):13-50.

[137] Ulanimo, V., O'Leary-Kelley, C., & Connolly, P. (2007). Nurses' perceptions of causes of medication errors and barriers to reporting. Journal of Nursing Care Quality, 22 (1), 28-33.

[138] Ulrich, B., & Kear, T. (2014). Patient safety and patient safety culture: Foundations of ex - cellent health care delivery. Nephrology Nursing Journal, 41(5), 447-456, 505.

[139] Vaismoradi, M., Salsali, M., & Marck, P. (2011). Patient safety: nursing students' perspectives and the role of nursing education to provide safe care. International nursing review, 58(4), 434–42.

[140] Vigamox Product Monograph (2015). Product monograph, 1–23.

[141] Vincent, C.A., & Coulter, A. (2002). Patient safety: what about the patient?.Quality & safety in health care; 11(1), 76–80.

[142] Walston, S., Al-Omar, B., & Al-Mutari, F. (2010). Factors affecting the climate of hospital patient safety: A study of hospitals in Saudi Arabia. International Journal of Health Care Quality Assurance, 23 (1),35-50.

[143] Ward, J.K., McEachan, R.R.C., Lawton, R., Armitage, G., Watt, I., & Wright, J. (2011). Patient involvement in patient safety: Protocol for developing an intervention using patient reports of organisational safety and patient incident reporting. BMC health services research, 11, 130.

[144] Warholak, T.L., Queiruga, C., Roush, R., & Phan, H. (2011). Medication Error Identification Rates by Pharmacy, Medical, and Nursing Students.American Journal of Pharmacology Education, 75(2): 24.

[145] Westbrook, J. I., Rob, M. I., Woods, A., & Parry, D. (2011). Errors in the administration of intravenous medications in hospital and the role of correct procedures and nurse experience. BMJ Quality & Safety, 20(12), 1027–34.

[146] White, M.M., Gupta, M., Utman, S.K., &Dhillon, B. (2009). Importance of side marking in ophthalmic surgery. The Surgeon, 7(2), 82-85.

[147] White, C.S. (2011). Advanced Practice Prescribing: Issues and Strategies in Preventing Medication Error. Journal of Nursing Law, 14(3-4), 120-127.

[148] World Health Organization (WHO). (2007). Monographs: Dosage forms: General monographs: Ophthalmic preparations. Available from: http://apps.who.int/phint/en/p/docf/

[149] World Health Organization (WHO). Patient safety. World Health Organization (WHO), Regional Office for Europe, www.euro.who.int/en/what-we-do/health-topics/Health-systems/patient-safety (2011, accessed October 2012).

[150] World Health Organization. (2012). Violence and Injury Prevention. Accessed at www.who.int/violence_ injury_ prevention/ other_injury/falls/en on 25 July 2012

[151] World Health Organization. (2007). Patient Identification. Patient Safety Solutions,1,(2) WHO Press, Geneva.

[152] Wright, K. (2013). The role of nurses in medicine administration errors. Nursing Standard (Royal College of Nursing (Great Britain), 27(44), 35–40. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/23940937

[153] Wu, A.W., Pronovost, P., & Morlock, L. (2006). ICU incident reporting systems. J Crit Care;17(2):86-94.

[154] Wung, CH., Yu, T.H., Shih, C.L., Lin, C.C., Liao, H.H., & Chung, K.P. (2011). Is it enough to set national patient safety goals? An empirical evaluation in Taiwan. Int J Qual Health Care, 23(4),420-428.

[155] Zakari, N.M.A. (2011), Attitude of Academic Ambulatory Nurses toward Patient Safety Culture in Saudi Arabia. Life Science Journal,8(3),230-237.

[156] Zecevic, A.A., Salmoni, A.W., Speechley, M., & Vandervoort, A.A. (2006). Defining a fall and reasons for falling: comparisons among the views of seniors, health care providers, and the research literature. Gerontologist;46:367-76.