

# A STUDY TO ASSESS THE PRACTICE AND ATTITUDE REGARDING PREVENTION OF MEDICATION ERRORS AMONG GENERAL WARD NURSES AT SGT HOSPITAL, GURUGRAM (HARYANA)

<sup>1</sup> Tanya Yadav, <sup>2</sup> Bharti Sachdeva, <sup>3</sup> Kavita Pillai

<sup>1</sup>M.Sc nursing in Medical Surgical Nursing Department, <sup>2</sup>Associate Professor, <sup>3</sup>Assistant Professor  
Faculty of Nursing, SGT University, Gurugram, Haryana -122505, INDIA

## *Abstract-*

### **Introduction**

In a medical environment, using medications is a complicated procedure, and pharmaceutical errors have a serious impact on patient safety and can have fatal results. Healthcare practitioners might benefit from its underlying cause analysis in understanding the causes of pharmaceutical mistakes. According to a survey by the Institute of Medicine on the frequency of pharmaceutical errors in the United States, at least 1.5 million Americans suffer injuries as a result of drug errors each year. There is definitely at least one drug mistake per patient every day in the hospital.

**Aim:** The present study aimed to assess the practice and attitude regarding prevention of medication errors among general ward nurses at SGT Hospital, Gurugram (Haryana)".

### **Material and Methods**

The research approach adopted for the study was a qualitative approach with only a descriptive research design. 60 staff nurses were selected as a sample by non-probability convenient sampling technique for conducting the study. The data was collected through the administration of a structured questionnaire. The data was organized and analyzed using descriptive and inferential statistics according to the objectives of the study.

### **Result**

The result shows in this study that practice score among staff nurses regarding prevention of medication error as only 10 % of staff nurses have fair practice, and 90 % of staff nurses have a good practice, the attitude score among staff nurses regarding prevention of medication error as 23.3% nurses have unfavorable attitude and the majority of the nurses 76.6% have favorable attitude. There is no significant association between medication error and selected demographic variable.

### **Conclusion**

The study concluded that the majority of the nurses have good practice and the majority of the nurses have a favourable attitude regarding the prevention of medication error.

**Key words-** Attitude, practice, medication error.

## **INTRODUCTION**

Medication use is a complex process in medical setting & medication errors are a significant issue affecting patient safety & lead to dangerous consequences for them. Its root cause analysis can help health care professionals regarding causative factors of medication errors. Institute of Medicine issued a report on the prevalence of medication errors in the United States in which at least 1.5 million Americans are injured every year by medication errors. Every patient in the hospital is probably subjected to at least one medication error every day. Though many of these errors do not cause harm, there may be as many as 7000 people who die every year from medication errors.<sup>1</sup> Medication error is broadly defined as any error in the prescribing, dispensing, or administration of a drug. Medication error is the single most preventable cause of patient harm.<sup>2</sup> Medication errors are prevalent in hospital settings. To ensure patient safety and provide better health services, medication errors should be curbed. India is still lacking a regulatory system for the control of medication errors. Therefore, a stringent regulatory setup should be established to reduce medication errors.<sup>1</sup> Medication error is one type of error that gets the most attention and effort to improve the quality and safety of healthcare because it can increase the cost of health care in large numbers. Some of the most common medication errors are misconduct, incorrect dosages, and incorrect intervals. Nurses and other health professionals involved in the Management and Use of Drugs have a responsibility to create an environment and working practices that prioritize patient safety. Medication error is deemed to occur if the drug chart of patients showed any of the following: illegible handwriting, medication name and dosage error, medication admission, access, or discharge medication. Efforts should be made to improve safety in drug delivery including national efforts, education, and training for nurses and system changing<sup>3</sup>.

## **MATERIALS AND METHODS**

The quantitative research approach was considered to be appropriate for the present study. The research design selected for the present study was in order to achieve the objectives, a descriptive survey study design was chosen for the present study. The

present study was conducted at SGT Hospital of Gurugram. Data were collected during the month of April for 3 weeks. Permission was taken from the consent authority.

The rationales for selecting the setting were: -Familiarity with the setting, Availability of sample subjects, Feasibility of conducting the study, Easy access to the subjects, Co-operation and administrative approval for conducting the study. The population for the present study was staff nurses working in general wards at SGT Hospital. 60 staff nurses who satisfied the inclusion criteria were chosen for this study.

The sample for this research was chosen using a non-probability convenient sampling method. The research has undergone review and approval by the Institutional Ethical Committee at IEC, SGT University. Informed consent was obtained from all the subjects. Confidentiality and anonymity of the subjects have been maintained throughout the study, and a total of 60 subjects were selected by using a non-probability convenient sampling technique. Informed consent was taken from the participants. Participants were interviewed regarding Demographic Performance and Practice were assessed by using a self-structured checklist and attitudes were assessed by using a structured Likert scale.

### DEMOGRAPHIC DATA

It contains 5 questions which include Age, gender, Education, marital status, and year of experience. Self-structured checklist prepared including Pre-medication preparations and principles of medication administration (right patient, right route, right time, right dose, right record of administration, right guidance right way). A self-structured Likert scale was prepared for assessing the attitude.

### RESULTS

**Table 1.1-Frequency and Percentage Distribution of Demographic Variables (N=60)**

S.NO	DEMOGRAPHIC VARIABLE	FREQUENCY	PERCENTAGE
<b>I.</b>	<b>AGE</b>		
1.1	21 - 25 years	46	76.7%
1.2	26 - 30 years	10	16.7%
1.3	31 – 35years	4	6.7%
1.4	35 and above	0	0%
<b>I.</b>	<b>GENDER</b>		
2.1	Male	23	38.3%
2.1	Female	37	61.7%
<b>I.</b>	<b>EDUCATIONAL QUALIFICATION</b>		
3.1	Diploma	32	53.3%
3.2	Graduate	21	35.0%
3.3	Post-graduate	7	11.7%
<b>V.</b>	<b>MARITAL STATUS</b>		
4.1	Married	15	25%
4.2	Unmarried	45	75%
<b>V.</b>	<b>YEAR OF EXPERIENCE</b>		
5.1	1 – 3 years	52	86.7%
5.2	4 – 6 years	7	11.7%
5.3	7 – 9 years	0	0%
5.4	10 years and above	1	1.7%

**Table 1.2: Practice score regarding prevention of medication error among nurses (N=60)**

Area wise Practice Score	No of items	Max. Score	Mean score	Mean %	SD
Pre-medication preparations	2	2	1.8	90.0%	0.40
Right patient	6	6	5.2	86.6%	0.79
Right route	2	2	1.86	93.0%	0.34
Right time	3	3	2.53	84.3%	0.56
Right dose	4	4	3.61	90.3%	0.49
Right record of administration	4	4	3.48	87.0%	0.59

Right guidance	2	2	1.83	91.5%	0.37
Right way	1	1	0.80	80.0%	0.40
<b>Total Practice score</b>	<b>24</b>	<b>24</b>	<b>21.13</b>	<b>88.04%</b>	<b>1.92</b>

Area-wise practice score means given in table shows that staff nurses have a 90 % practice score in Pre medication preparation. Staff nurses have 86.6 % practice score in right patient, 93% practice score in right route, 84.3 % score in the right time, 90.3 % practice score in the right dose, 87% practice score in right records of administration, 91.5 % practice score in right guidance, 80 % practice score in the right way among general ward staff nurses regarding prevention of medication error among nurses.

**Table 1.3: Distribution of subjects according to practice level.**  
(N=60)

Practice Level	Score	Range	Frequency	Percentage
Poor practice	0 -12	Less than 50%	00	0%
Fair practice	13 – 18	51 to 75%	06	10%
Good practice	19 – 24	More than 75%	54	90%
<b>Total</b>			<b>60</b>	<b>100.0%</b>

Table no. 1.3 displays the practice score among staff nurses regarding prevention of medication error as only 10 % of staff nurses have fair practice, and 90 % of staff nurses have good practice.

**Table 1.4: Attitude regarding prevention of medication error among nurses**

(N=60)

Variable	No of items	Max. Score	Mean score	Mean %	SD
Attitude scale	10	40	22.46	56.15%	2.75

Table no. 1.4. displays the attitude among staff nurses regarding prevention of medication error of mean percentage is 56.15% and the standard deviation is 2.75.

**Table 1.5: Distribution of subjects according to the level of attitude.**  
(N=60)

Attitude Level	Score	Range	Frequency	Percentage
Unfavorable	1 to 20	Less than 50%	14	23.3%
Favorable	21 to 40	51 to 100%	46	76.7%
<b>Total</b>			<b>60</b>	<b>100.0%</b>

Table no. 1.5 displays the attitude score among staff nurses regarding prevention of medication error as 23.3% of nurses have unfavorable attitudes and the majority of the nurses 76.6% have favorable attitude.

**To find association between practice regarding prevention of medication error among nurses with selected demographic variable.**

(N=60)

Demographic Variable	Fair practice	Good Practice	Calculated value & df	P-Value
Age in year				
a) 21-25 years	5	41	0.308	1.000
b) 26-30 years	1	9	df=2	
c) 31-35 years	0	4		
Gender				
a) Male	3	20	0.031	0.859
b) Female	3	34	df=1	
Education qualification				
a) Diploma	1	31	4.019	0.115
b) Graduation	4	17	df=2	
c) Post-graduation	1	6		
Marital status				
a) Married	1	14	0.000	1.000
b) Unmarried	5	40	df=1	

Year of experience				
a) 1-3 years	5	47	1.362	0.593
b) 4-6 years	1	6	df=2	
c) 10 years and above	0	1		

\* =Significant

P ≤ 0.05

Data presented in table shows that chi square value of Age, gender, Education, marital status, and year of experience as tabulated value ( $\chi^2=1.000$ ), ( $\chi^2=0.859$ ), ( $\chi^2=0.155$ ), ( $\chi^2=1.000$ ), ( $\chi^2=0.593$ ), respectively. The computed chi square values for the selected demographic variables i.e., age, gender, Education, marital status, and year of experience are not significant at 0.05 level of significance.

**To find association between attitude regarding prevention of medication error among nurses with selected demographic variable.**

(N=60)

Demographic Variable	Favorable attitude	Unfavorable attitude	Calculated value & df	P-Value
Age in year				
a) 21-25 years	36	10	2.361	0.290
b) 26-30 years	6	4	df=2	
c) 31-35 years	4	0		
Gender				
a) Male	19	4	0.296	0.586
b) Female	27	10	df=1	
Education qualification				
a) Diploma	26	6	1.70	0.508
b) Graduation	14	7	df=2	
c) Post-graduation	6	1		
Marital status				
a) Married	12	3	0.000	1.000
b) Unmarried	34	11	df=1	
Year of experience				
a) 1-3 years	40	12	0.737	0.744
b) 4-6 years	5	2	df=2	
c) 10 years and above	1	0		

\* =Significant

P ≤ 0.05

Data presented in table shows that chi square value of Age, gender, Education, marital status, and year of experience as tabulated value ( $\chi^2=0.290$ ), ( $\chi^2=0.586$ ), ( $\chi^2=0.508$ ), ( $\chi^2=1.000$ ), ( $\chi^2=0.744$ ), respectively. The computed chi square values for the selected demographic variables i.e., age, gender, Education, marital status, and year of experience are not significant at 0.05 level of significance.

### SUMMARY OF THE STUDY

The current research was exploratory. The primary purpose of this study is to assess practice and attitude regarding the prevention of medication error among general ward nurses in SGT Hospital Gurugram Haryana. The research study used a quantitative research technique with a descriptive survey study. Non-probability convenient sampling method was adopted in this study. During data collection, the sample consisted of Staff nurses working at SGT Hospital of Gurugram. The tool consists of a structured Questionnaire schedule to know about the sample characteristics. It consists of Self structured checklist prepared including Pre-medication preparations, principles of medication administration and a Self-structured Likert scale prepared for assessing the attitude. Tools were given to the 7 experts along with a criteria checklist in the specialization of Medical and Surgical Nursing. Experts were asked to assess items for relevance, clarity, and the title's and subject area's appropriateness. The reliability of the tool was assessed by the Split-Half Method. It was done for the structured questionnaire schedule by the Split-Half Method. The 'r'-value obtained was 0.9 which shows a higher positive correlation. Hence the tool was considered reliable. These tools have been verified to be trustworthy. With formal permission from Hospital medical superintendent and content validity from Experts, the pilot study was conducted with 06 subjects in Prakash Hospital, Manesar, Gurugram, Haryana for 1 week in the month of March 2022.

### CONCLUSION

The investigator identified that majority of the staff nurses have a 90 % practice score in Pre medication preparation, 86.6 % practice score in right patient, 93% practice score in right route, 84.3 % score in the right time, 90.3 % practice score in the right dose, 87% practice score in right records of administration, 91.5 % practice score in right guidance, 80 % practice score in the right way among general ward staff nurses and displays the attitude score among staff nurses regarding prevention of medication error as 23.3% nurses have unfavourable attitude and the majority of the nurses 76.6% have favorable attitude.

**RECOMMENDATIONS:**

- ❖ Similar studies can be done on a large sample to make a more valid generalization.
- ❖ A study of all hospital employees might be done.
- ❖ A follow-up study may be conducted to evaluate the effectiveness of health education programs prevention of medication error among staff nurses in terms of knowledge, practice and attitude.
- ❖ Findings of the research when communicated through a conference, journals or other media encourage the nursing personnel to follow the prevention of medication error among staff nurses to decrease medication error.
- ❖ Nursing research has a tremendous effect on current and future professional nursing education and practice.

**CONCLUSION**

Application of Orem's theory by Nursing students on patients was found to be effective, which improved patient satisfaction. The present study was intended to assess the effectiveness of the application of Orem's theory of nursing students on the satisfaction of patients admitted in the Ortho ward, SGT Hospital, Gurugram. The report of the study found that there is an improvement in patient.

**REFERENCES:**

1. Sewal RK, Singh PK, Prakash A, Kumar B, Medhi B. A prospective study to evaluate awareness about medication errors amongst health-care personnel representing North, East, West Regions of India. *Int J Appl Basic Med Res* [Internet]. 2014 [cited 2022 Jul 30];4(1):43–6. Available from: <https://pubmed.ncbi.nlm.nih.gov/24600578>.
2. Samundeeswari A, Vinayaka Missions College of Nursing, AVMC, Puducherry. Nurses knowledge on prevention of medication error. *J med sci clin res* [Internet]. 2018 [cited 2022 Jul 30];6(3). Available from: <https://jmscr.igmpublication.org/home/index.php/archive/148-volume-06-issue-03-march-2018/4448-nurses-knowledge-on-prevention-of-medication-error>.
3. Solanki N. Study of medication errors in Western population of India [Internet]. Unpublished; 2014. Available from: <http://dx.doi.org/10.13140/2.1.1932.9922>.
4. Damin Abukhalil A, Amer NM, Musallam LY, Al-Shami N. Medication error awareness among health care providers in Palestine: A questionnaire-based cross-sectional observational study. *Saudi Pharm J* [Internet]. 2022;30(4):470–7. Available from: <http://dx.doi.org/10.1016/j.jsps.2022.01.014>.
5. Alsaleh FM, Alsaheed S, Alsairafi ZK, Almandil NB, Naser AY, Bayoud T. Medication Errors in Secondary Care Hospitals in Kuwait: The Perspectives of Healthcare Professionals. *Front Med (Lausanne)*. 2021 Dec 20; 8:784315. doi: 10.3389/fmed.2021.784315. PMID: 34988097; PMCID: PMC8720773.
6. Knowledge and attitude regarding medication error among nursing students in a selected college at mangaluru. *Indian j forensic med toxicol* [Internet]. 2021; Available from: <http://dx.doi.org/10.37506/ijfmt.v15i4.16660>.
7. Dorothy A, Yadesa TM, Atukunda E. Prevalence of Medication Errors and the Associated Factors: A Prospective Observational Study Among Cancer Patients at Mbarara Regional Referral Hospital. *Cancer Manag Res*. 2021 May 10;13:3739-3748. doi: 10.2147/CMAR.S307001. PMID: 34007209; PMCID: PMC8121619.
8. Umoh EO, Opue BO. Knowledge and attitude of medication error among nurses in federal neuro-psychiatric Hospital, Calabar. *Cognizance Journal of Multidisciplinary Studies* [Internet]. 2021;1(6):20–44. Available from: <http://dx.doi.org/10.47760/cognizance.2021.v01i06.003>.
9. International journal of pharmaceutical sciences and research. Vol. 11. *International Journal of Pharmaceutical Sciences and Research*; 2020.
10. Samundeeswari A, Vinayaka Missions College of Nursing, AVMC, Puducherry. Nurses knowledge on prevention of medication error. *J med sci clin res* [Internet]. 2018;6(3). Available from: <http://dx.doi.org/10.18535/jmscr/v6i3.45>.