"A Study To Assess The Knowledge And Practice Of Medication Safety Among Staff Nurses In Selected Hospital At Mangaluru"

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DOI: 10.47750/pnr.2023.14.S01.80

Abstract

Objectives: To assess the knowledge of medication safety among staff nurses, to assess the practice on medication safety among staff nurses, to find out the correlation between knowledge and practice of medication safety among staff nurses and to find the association of knowledge and practice of medication safety among staff nurses with selected demographic variables.

Method: Descriptive research design was carried out on 94 staff nurses working in selected hospital, selected by non-probability purposive sampling technique to test the knowledge and practice on medication safety. The data was collected by using structured knowledge questionnaire and self-observational checklist.

Results: The study revealed that majority (89.4%) of the subjects belongs to an age group of 20-29 years and majorities (90.4%) of them were female. Most (45.7%) of the subjects belongs to B.Sc nursing educational status and majority (59.6%) of the subjects had the clinical experience of less than 2 years. Most of (57.4%) of the subjects were working in general ward and majorities (75.5%) of the subjects were undergone training on medication safety. The study showed that 81.9% of the subjects had adequate, 14.9% of the subjects had moderate and 3.2% of the subjects had poor knowledge regarding medication safety. The study revealed that 60.6% of the subjects had adequate and 39.3% of the subjects had moderate level of practice of medication safety. There was a significant positive correlation between knowledge and practice of medication safety ($p=0.002$, $p<0.05$). Hence H_1 was accepted. There was a significant association with knowledge on medication safety and selected demographic variables such as age in years ($\chi2=3.059$, $p<0.05$), gender ($\chi2=0.724$, $p<0.05$), educational status ($\chi2=23.658$, $p<0.05$), clinical experience in years ($\chi2=5.32$, $p<0.05$), area of working ($\chi2=23.738$, $p<0.05$) and undergone any training on medication safety ($\chi2=1.007$, $p<0.05$). Hence H_2 also accepted.

Conclusion: Most of the staff nurses got adequate knowledge and practice on medication safety. Only few of the staff nurses with poor knowledge and moderate practice which can be improved by providing in-service education.

Key words: Knowledge, Practice, Staff nurses, Medication safety

2. INTRODUCTION:

Medication is the substance used in the diagnosis, treatment, cure, relief or prevention of heath alteration. Too much of medicines consumption may cause severe side effects. Some of them also cause drug interactions when used together. An expired medicine or one that is spoiled can be ineffective and even dangerous.[1]Medication error can significantly affect patient safety and results in harm for the patients.[2] Medications with complex dosing regimens and those given in specialty areas are associated with increased risk of adverse drug event.[3] Approximately 1,06,000 deaths occur annually due medication error. In United States, medication error is the number 4 to 6 leading cause of death.[4]Incorrect medication administration, labeling and negligence are the common mistakes while giving medication.[5] Lack of knowledge about drug indication, contraindications and interactions has become a problem among nurses and it is life threatening to patient.[6]

Each year in United States alone 7000 to 9000 people die as a result of a medication error.[7] In India, studies done in Uttarakhand and Karnataka have documented medication error rate is 25.7% to 5.34%.[8]Medication error occurs in all stages, most frequently at administration, prescribing and dispensing.[9] Hence the knowledge of nurses is important in modifying safety practices and also to use develop a safer practice in hospitals.[10]

3. MATERIALS AND METHOD

The aim of the study to assess the knowledge and practice of medication safety among staff nurses in selected hospital in Mangaluru. Descriptive research design was carried out on 94 staff nurses working in selected hospital by non-probability purposive sampling technique to test the knowledge and practice on medication safety. The data was collected by using

structured knowledge questionnaire and self-observational checklist. Data were analyzed by using descriptive and inferential statistics

4. FINDINGS

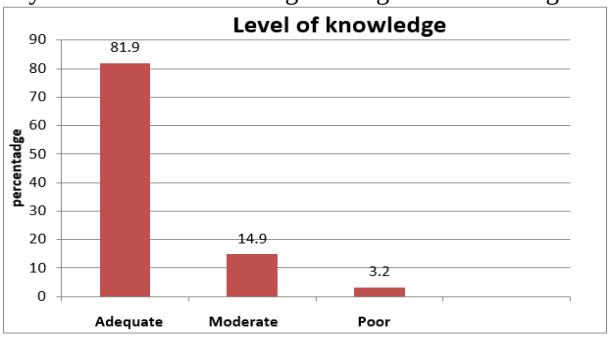
Section I: Description of demographic characteristics of staff nurses

This section deals with characteristics of 94 staff nurses' knowledge and practice of medication safety in terms of frequency and percentage. The sample characteristics are described under the headlines of age, gender, educational status, area of working, experience, undergone any medication safety training.

Majority of the subjects (89.4%) belongs to the age group of 20-29 years and most of them (90.4%) were female. Majority 45.7% of staff nurses had B Sc. Nursing as educational status and most of them 59.6% had less than 2 years of work experience. Majority of them (57.4%) were working in general wards and most of them had (75.5%) had undergone training on medication safety.

Section II: Description of level of knowledge among staff nurses regarding medication safety

Bar diagram 1: Analysis of level of knowledge among staff nurses regarding medication safety



The data in the bar diagram indicates that the majority the (81.9%) of the staff nurses had adequate level of knowledge and 14.9% of staff nurses had moderate level of knowledge. Only 3.2% staff nurses had poor knowledge

Table 1: Knowledge score, Mean, Range and SD of staff nurses on medication safety

n=94

Variables	Obtained score Minimum	Maximum	Range	Mean	SD
Knowledge	8.00	28.00	25	22.52	3.89

Max score: 30

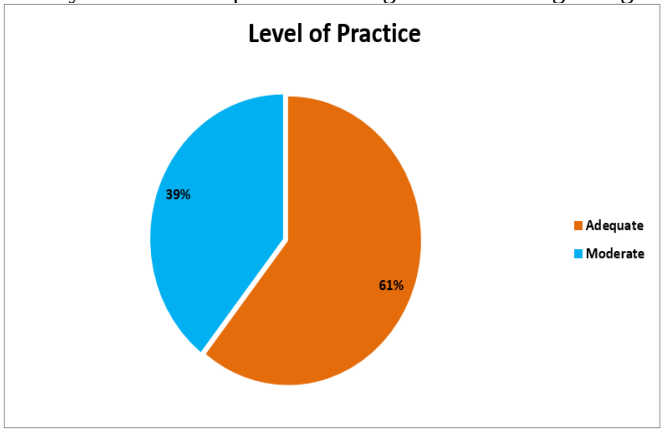
Table 2: Distribution of knowledge among staff nurses regarding medication safety

n=94

SL NO	Domain	Mean	Median	SD
01	Prescription and Administration	**4.22**	**4.00**	**.96**
02	Types of medication	**3.60**	**4.00**	**.64**
03	Dose, route, frequency	**5.89**	**6.00**	**1.33**
04	Drug calculation	**3.68**	**4.00**	**1.10**
05	Side effects	**2.78**	**3.00**	**1.19**
06	Disposal of medication	**2.37**	**2.0**	**.63**

Section III: Description of level of practice among staff nurses regarding medication safety

Pie diagram 1: Analysis of level of practice among staff nurses regarding medication safety



The data in pie diagram 1 shows that most of the staff nurses (60.6%) had adequate level of practice whereas 39.45% had moderate level of practice. None of the staff nurses had a poor level of practice**.**

Table 3: Practice score, Mean, Range and SD of staff nurses on medication safety
n=94

Variables	Minimum Score	Maximum Score	Range	Mean	SD
Practice	7	20	25	14.47	14.0

Max score: 30

Section IV: Correlation between the knowledge and practice on medication safety

Table 4: Correlation between knowledge and practice levels of staff nurses regarding medication safety
n=94

Variable	Mean	Correlation coefficient	p value
Knowledge	**22.52**		
Practice	**14.47**	**0.320**	**0.002**

SD value:

Table 5 shows the correlation between knowledge and practice levels of staff nurses regarding medication safety where correlation coefficient was 0.320. There is a significant positive correlation between knowledge and practice of medication safety ($p=0.002$, $p<0.05$). Hence H_1 was accepted.

Section V: Association between knowledge and selected demographic variables

There was a significant association with knowledge on medication safety and selected demographic variables such as educational status ($\chi2=23.658$, $p<0.05$) and area of working ($\chi2=23.738$, $p<0.05$). Hence H_2 was accepted. There was no significant association between knowledge on medication safety and selected demographic variables such as age, gender, clinical experience and training on medication safety ($p>0.05$).

Section VI: Association between practice and selected demographic variables

There was no significant association between practice regarding medication safety and selected demographic variables such as age, gender, educational status, clinical experience, area of working and training on medication safety ($p>0.05$). Hence H_3 was rejected and null hypothesis was accepted.

5. CONCLUSION

This study proved that the staff nurse had adequate knowledge and practice of medication safety. There is a positive correlation between knowledge and practice of medication safety. There is an association between knowledge and practice with selected demographic variables.

6. Ethical Clearance

Yenepoya Ethics Committee-2 (YEC) approved our study protocol number is YEC/808 titled "**Assess the knowledge and practice of medication safety among staff nurses in selected hospital at Mangaluru"** on 28/8/2021. Under the chairmanship of Dr. Vikram Shetty.

7. SOURCE OF FINDING: Self

8. CONFLICT OF INTEREST: Nil

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