

## **Analyze the gap between knowledge and practice regarding patient safety procedures and factors responsible for the gap among staff nurses working in selected hospitals in kanpur, uttar pradesh.**

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### **Abstract**

A small scale study was done to analyse the gap between knowledge and practice regarding patient safety practices. Every area in health care system was involved by nurses; they will be working for 24 hours in a day and seven days in a week. This makes a sound knowledge base and plays critical role in patient safety. A Convergent mixed method analysis was done with 10 staff nurses as samples were selected by Convenient sampling technique. The result shows that with knowledge level of all three practices were in moderate level of knowledge and with regard to practice most of samples having inadequate practice. The correlation between knowledge and practice shows negative correlation with all the practices. The factors responsible for the gap was analysed by Qualitative data by structured questionnaire, 6 among them have accepted that there is a gap between theory and practice in nursing field and regarding factors responsible for medication safety the subcategories were mutual understanding and confidence on themselves, in communication safety the factors are less communication due to fear and workload of staffs, with infection control practice the factors are less staff members and confusion in disposing waste. Thus, the study concludes that there is an existence of gap between theory and practice and there are many factors are responsible for that gap. It is important to reduce the factors so that staffs will work effectively in health care system..

**Keywords:** Analyze, Gap between Knowledge and Practice, patient safety procedures, factors responsible for gap

### **1. Introduction**

The serious global health concern is Patient Safety. According to W.H.O it is calculated that 1 in 300 patients are at risk for preventable medical accident.1 Every area in health care system was involved by nurses, they will be working for 24 hours in a day and seven days in a week. This makes a sound knowledge base and plays critical role in patient safety.2 Health care professionals need to maintain their competency which in turn needed to ensure patient safety and provide safe care. Researchers suggests that providing positive attitudes, adequate skill and knowledge regarding patient safety among nurses, is likely to improve safe practices, to strengthen patient care and also to decrease mortality and morbidity rates. There is a unique foundation of theoretical knowledge which is specific to the caring professions. During the education and career as a nurse, a recurrent question was; how do we use this specific theoretical caring knowledge of the phenomenon of caring that is unique and specific to the nursing profession. For some reason the theoretical foundation and context of providing care seems to fade with time in clinical practice3

The nurses are often the first line of intervention to rescue a patient from foreseeable harm. The goal of nursing education is to ensure professional clinical competencies and to enhance the delivery of safe, quality

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nursing care. Keeping in mind patient safety, the most common errors occurring during the services of nursing were hospital infections, errors in medication administration, lacking while monitoring the patients, falls, lacking of communication etc. Gaps is defined as breakdown or discontinuity in the care, which is prevalent in health care. The combination of technology, human relation and process may fabricate many gaps between providers. The issue Gap between theory and practice is common in nursing profession. Since the profession nursing is considered to enable the application of applying theory into practice.<sup>5</sup> The theory practice gap as it sometime called, occurs when practitioners struggle to integrate knowledge learnt in an academic environment with real world clinical practice. The goal of nursing education is to ensure professional clinical competencies and to enhance the delivery of safe, quality nursing care.<sup>6</sup>

### **1.1 Objectives:**

- To assess the gap between knowledge and practice on Medication Safety
- To assess the gap between knowledge and practice on Communication Safety
- To assess the gap between knowledge and practice on infection Control Practice.
- To Associate the level of education and Experience with knowledge regard to all Three practices
- To Associate the level of education and Experience with practice regard to all Three practices
- To correlate the level of gap between knowledge and practice with regards to all the three practices.
- To find the factors responsible for the gap between knowledge and practice.

### **1.2 Hypothesis:**

There is a significant difference between the Nursing knowledge and Practice in Patient safety practices.

There is a positive correlation between the level of gap between knowledge and practice with regards to all the three practices.

## **2. Materials And Methods**

### **2.1 Research Approach:**

A Mixed Approach with Quantitative and Qualitative research was used

### **2.2 Research Design:**

A Convergent Mixed Method Research design

### **2.3 Research Settings:**

Staff Nurses working in selected hospitals in Kanpur District

### **2.4 Sample and sample size:**

10 Staff Nurses working in selected hospitals

### **2.5 Sampling Technique:**

10 samples of Staff Nurses were selected by using convenient sampling technique.

### **2.6 Description of the Instrument**

The tool used for the data collection was a structured questionnaire was used to assess the knowledge regarding patient safety practices, a checklist was used to assess the practice and in depth un-structured interview with open ended questions was used to assess the factors responsible for the gap. Subdivisions of the tool as follows

Section A : Consist of Socio demographic variables such as age, gender, education, years of experience, marital status, frequency of night duty, duty hours per day and nurse patient ratio.

Section B : A structured multiple-choice questionnaire was used to assess the knowledge regarding patient safety practices.

Section C : Consists of Checklist for assessing the patient safety practices which contains 40 statements

Section D : Consists of open-ended Question to find the factors responsible for Gap between knowledge and practice.

**3. Results:**

The result of the study was divided into 4 sections.

Section A: To assess the gap between knowledge and practice on Medication Safety, Communication Safety and Infection Control Practice

Section B: To Associate the level of education and Experience with knowledge and practice regard to all Three practices

Section C: To correlate the level of gap between knowledge and practice with regards to all the three practices.

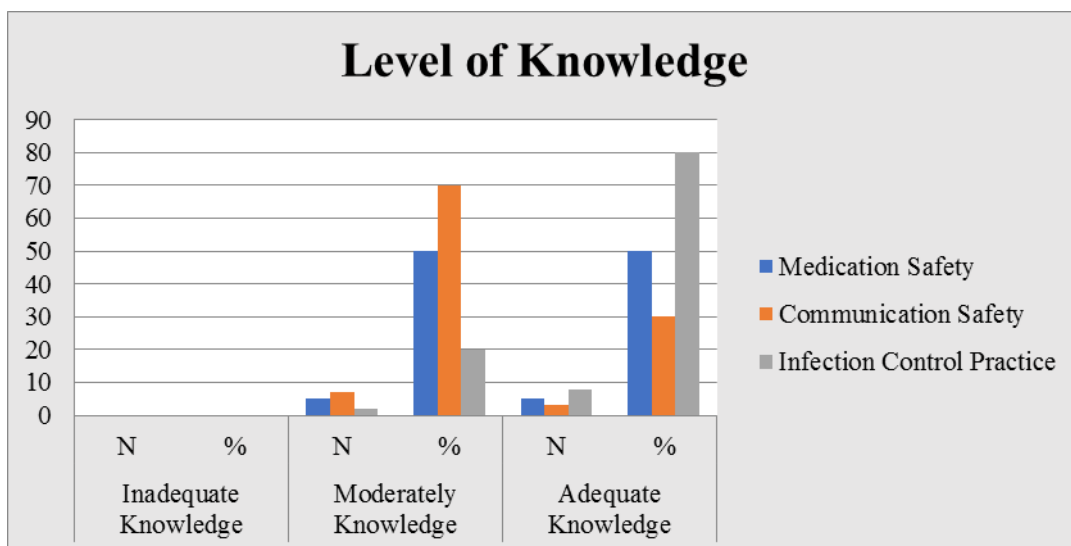
Section D: To find the factors responsible for the gap between knowledge and practice.

**3.1 Section A:**

**Table 1:** shows the level of knowledge on Medication Safety, Communication Safety and Infection Control Practice N=10

Patient Safety Practices	Level of Knowledge					
	Inadequate Knowledge		Moderately Knowledge		Adequate Knowledge	
	No	%	No	%	No	%
Medication Safety	0	0	5	50	5	50
Communication Safety	0	0	7	70	3	30
Infection Control Practice	0	0	2	20	8	80

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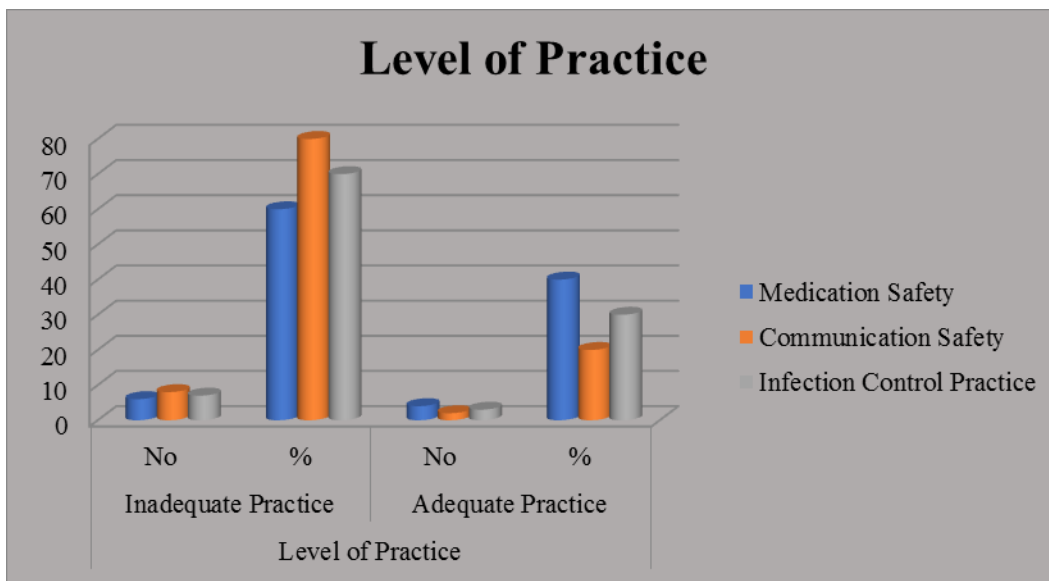


**Fig 1** Bar Diagram represents the Level of knowledge on all the three patient safety practices among nurses

(Table 1 Fig 1) describes that the knowledge level on medication safety is 5 (50%) having moderate knowledge and 5 (50%) having adequate knowledge, 7 (70%) having moderate knowledge and 3 (30%) having adequate knowledge on Communication safety and with regard to Infection Control Practice 2 (20%) have moderate knowledge and 8 (80%) having adequate knowledge.

**Table 2:** shows the level of practice on Medication Safety, Communication Safety and Infection Control Practice  
N=10

Patient Safety Practices	Level of Practice			
	Inadequate Practice		Adequate Practice	
	No	%	No	%
Medication Safety	6	60	4	40
Communication Safety	8	80	2	20
Infection Control Practice	7	70	3	30



**Fig 2** Cylindrical Diagram represents the Level of Practice on all the three patient safety practices among nurses

(Table 2 Fig 2) depicts that, In medication safety practice 6 (60%) having inadequate practice and 4 (40%) having adequate practice, 8 (80%) having inadequate practice and 2 (20%) having adequate practice on Communication safety and with regard to Infection Control Practice 7 (70%) have inadequate practice and 3 (30%) having adequate practice.

**Table 3:** Mean and Standard deviation of knowledge and practice on Medication Safety, Communication Safety and Infection Control Practice  
N=10

Patient Safety Practices	Level of Knowledge		Level of Practice	
	Mean	Standard Deviation	Mean	Standard Deviation
Medication Safety	14.9	3.43	5.4	1.16
Communication Safety	6.9	1.66	4.5	0.94
Infection Control Practice	16.7	1.79	9.5	3.16

The above table depicts the mean and standard deviation values of knowledge and practice of medication safety is 14.9 and 3.43 for knowledge and 5.4 and 1.16 for practice. With regards to communication safety 6.9 and 1.66 for knowledge and 4.5 mean and 0.94 as standard deviation for practice. With respect to infection control practice, knowledge having 16.7 and 1.79 and practice having 9.5 and 3.16 as mean and standard deviation.

### 3.2 Section B:

The association between the level of knowledge regarding Medication Safety, Communication Safety and Infection Control Practice with the demographic variables of samples like education and experience shows non significance.

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The association between the level of practice regarding Medication Safety, Communication Safety with the demographic variables of samples like education shows non-significance.

The practice level of Infection control practice and experience of nurses shows significance.

### 3.3 Section C:

**Table 4:** Correlation between the level of gap between knowledge and practice with regards to all the three practices N=10

S.No	Variable	Correlation ( r )	
1	Medication Safety	-0.54	Negative
2	Communication Safety	0.43	Positive
3	Infection Control Safety	0.39	Positive

The above table represents the correlation between the level of knowledge and practice regarding Medication Safety, Communication Safety and Infection Control Practice are showing positive correlation.

### 3.4 Section D:

To find the factors responsible for the gap between knowledge and practice

What extent do you think, why there is a gap between theory knowledge and practice?

Out of 10 staff nurses, 6 among them have accepted that there is a gap between theory and practice. They told that whatever they studied during their course it helped to gain knowledge but not able to apply the same in practice.

“It is well known that what we were studied in our course, and what we are practicing here is not merely synchronizing. Starting from basic procedure to the major procedure we cannot able to do as we studied. It is not possible to carry out all the steps what we have taught.”

“Theory what we learned is useful in understanding the procedure, but while doing the same procedure we are feeling difficulty to follow the steps.”

Can you able to provide factors which makes you not to follow the procedures

#### Medication Safety:

Among the 10 samples, regarding medication safety 4 nurses told that expiry date of medicines in cupboard was already checked by ward incharge or by other staff weekly once and informed to all in the ward. Patients buying medicines in hospital pharmacy and handover to staff nurse, the expiry date was checked by them at the time itself.

“In emergency time, it is difficult to see the expiry date of the drug while administering. So we will check once a week all the medicine’s expiry date either by any staff or our ward incharge will do that. Most of the staffs can able to differentiate look alike drugs, otherwise they will consult with the senior staff.”

“In wards, we are keeping the patient medication in the bed side trolley, so there is no chance of mixing of drug with other drugs. Pharmacist those who are providing drugs will check the dates, after bought by the patient attender we will check once”

5 out of 10 staffs told that they never committed mistakes while administering medication.

“Having these many years experience, I never given wrong medicine to any of my patient. There may be late of 30-40 minutes from the stipulated time, but I never miss or skip any doses”.

The researcher concludes that nurses are having self confidence and mutual understanding of team members

### **Communication Safety:**

Out of 10 samples, with respect to Communication safety 5 nurses told that they are taking handover in the nurses' station itself due to carrying of lots of case sheet.

“It is difficult to take all the case sheets of the patient and going nearby his bed to give or take hand over. In nurses station we have lots of space and it is possible to go through nurses notes and doctors prescription and everything.”

“If we take handover in taking in front of patient, they feel not good to hear the things about health and it may create unnecessary stress to the patient, so I am avoiding to take handover in front of patient.”

#### **Infection Control Practice:**

With regard to infection control practice on hand washing nurses prefer to use sanitizer than hand washing due to workload and less staff members, even hand washing is time consuming comparable to using sanitizer.

“It is difficult to wash hands for 30 seconds after touching every patients, because in morning we have lots of work to see with admission, discharges, doctors rounds etc...with all these we need to take care merely 30 patients in the ward by only three staff nurses, so we kept sterilium bottle, which we can use it before and after touching the patient.”

“In ward there is only one wash basin in nurse's room and it is difficult to have proper hand washing in the busy schedule, so we use disposable gloves and it can be changed frequently.”

with Biomedical Waste Disposal practice, 4 staffs were told they get confusion some times while disposing the waste in proper colour bin and discarding in wrong colour bins.

“It is somewhat difficult to get remember with the colors of disposable bags, we cannot able to discard the things in right color bags, sometimes due to busy schedule.”

“We are using alcohol swabs to clean the skin or sometimes we use disinfectant solution in the cotton to wipe the skin before injection. But we don't clean the vial or ampoule before breaking it.”

### **4.Conclusion:**

The study concludes that there is an existence of gap between knowledge and practice in nursing. The knowledge level of staff nurses in selected patient safety practices like medication safety, communication safety and infection control practice shows adequate level, while the practice on the selected practices shows inadequate. There is a positive correlation between knowledge and practice on selected patient safety practices. The factors responsible for gap were identified as self confidence and mutual understanding of team members for medication safety, lack of communication and fear about supervisor plays some role as responsible factor for communication. With regard to infection control practice the factors responsible for gap were confusion in colour coding, lagging in staff members and work load pressure

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