



# KNOWLEDGE AND PRACTICE GAP AMONG NURSING GRADUATES IN EMERGENCY DEPARTMENT OF A TERTIARY CARE HOSPITAL IN KARACHI, PAKISTAN



Ambreen Alwani<sup>1,2</sup>

1. NED University of Engineering & Technology, Karachi. 2. Pakistan Biological Safety Association

## Introduction

Emergency department of a hospital is the most vulnerable area of the facility because of infectious disease and biological hazards it encounters every day. The major reason for these encounters is the unidentified health conditions of patients coming from multiple backgrounds and the less experienced nursing graduates handling such cases. Therefore a cross-sectional study was conducted to assess the gap between knowledge and practices among nursing graduates in handling biohazards in emergency department of a tertiary care hospital in Karachi, Pakistan.

## Background

Nurses are the first responders to basic life support while waiting for the advance care skilled person. Therefore any gap in their practices can become very crucial. The nursing graduates have been provided with the knowledge of safety and precautionary practices against biological hazards which they can potentially encounter in emergency department. But this knowledge is test more on theoretical grounds rather than on practical grounds in their final year of nursing. Implication of this knowledge should be assured before they start working in the vulnerable area like emergency department. As a result of which many nursing staff mishandles the medical cases and ends up getting bio-hazard condition.

## Literature Review:

The practical activities of fresh nursing graduate training requires that students of this course, even though they are not yet health professionals, are exposed to the same risks, since they perform procedures that allow contact with biological material especially in emergency department and this can lead to bio-hazard conditions.

Some factors may contribute to a greater occurrence of accidents among nursing graduates, namely: dealing with sharp materials, blood pathogens, hazardous chemicals, Slips/trips/falls, equipment hazards, workplace violence, tuberculosis, workplace stress, MRSA, lack of use of personal protection equipment, inexperience and absence of a specific discipline on biosafety and/or occupational health in the academic curriculum as mandatory (Martins MR, 2012).

In view of the aforementioned problem, professors should emphasize the relevance of the biosafety theme, so that, in this way, students are able to understand the importance of content, even in undergraduate studies, which will consequently have a positive impact during their professional life (Lopes LP, 2011).

## Hypothesis

**H0:** There is no gap associated between bio-safety knowledge and practices among nursing graduates in emergency department of a hospital.

**HA:** There is a gap associated between bio-safety knowledge and practices among nursing graduates in emergency department of a hospital

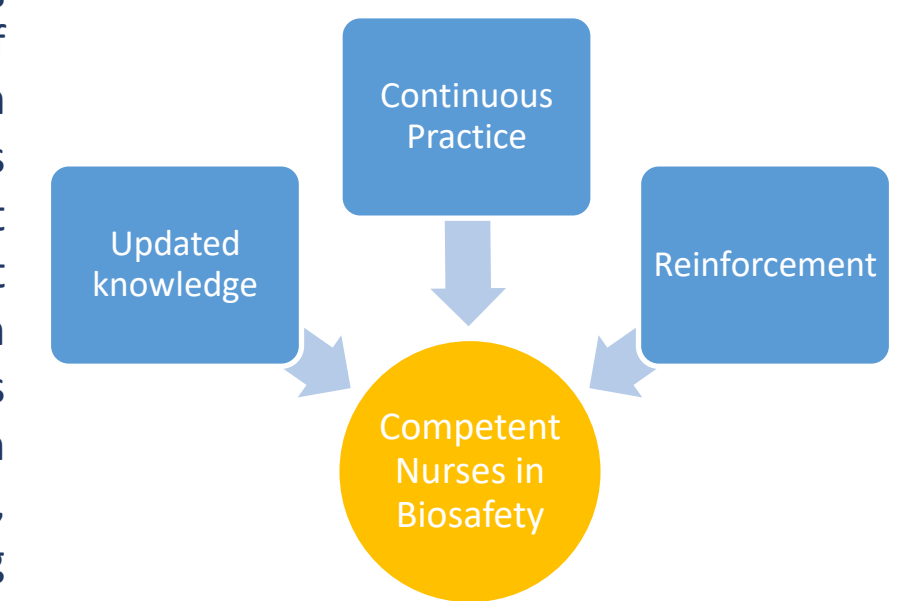


## Methodology

- Research Setting:** Research study setting was a tertiary care hospital located in Karachi, Pakistan. It is comprised of a medical college and a school of nursing, both of which are located at their principal teaching and clinical training site, and its hospital. The hospital has 550 beds in operation with multiple departments.
- Study Design & Sampling Technique:** This study has been conducted from February to March 2019 utilizing the cross sectional study design among the graduate nurses of 2018, worked in ED.
- Sample Size:** This followed the universal sampling strategy. Among total 35 nurses, only 33 who consented to participate in the study were included.
- Data Collection:** A structured questionnaire with closed end questions was developed after extensive literature review and on the basis of available biosafety standard texts (Lamson, 2017). There were 40 such questions on demographics, knowledge and Practices. After collecting the data, data were tabulated before data analysis.
- Data Analysis:** SPSS software (version 14) was used for analyzing the data. Frequencies were calculated for demographic data. Descriptive statistics was used to describe studied variables. Crosstabs was run to identify association between practice and knowledge using Pearson Chi- Square.

## Conclusion

The finding of this study provided support needed for the observed gaps in knowledge and practice among nursing graduates in ED, through scientific research. Despite of high knowledge among nurses and significant association among studied variables of knowledge and practice, gaps can be observed, this makes the conditions much worst and unmanageable. Misconduct of precautions against biohazards and its disposal by the nursing graduates can result in increase in burden of infectious disease. If this gap can be narrow down by providing appropriate solution and recommendations by the service providers, participants can help improving the current nursing curriculum structure, clinical practices and skills to become competent nurses.



## Recommendations

- There is an imperative need for inclusion of mandatory certified course work on bio-safety for recent nursing graduates before the start for their formal training at the emergency department.
- Moreover, There should be a policy for periodic biosafety training for staff in emergency department for keeping them updated regarding latest development in the field. This will facilitate in improving the quality of care of patients in emergency department.
- For health workers, there is, specific regulatory standard (RS 32) which aims to determine the safety behaviors of these workers who provide services to health facilities, must be followed.

## Limitations

- This study was based on single institute study and batch only.
- Unequal ration of male and female nursing graduates.
- It was a cross sectional study, The study depicts results of current situation only.
- Frequencies of biohazards accidents and health issues were not recorded among graduate nurses.
- Biosafety variables were taken from International biosafety standard by OSHA.

## References

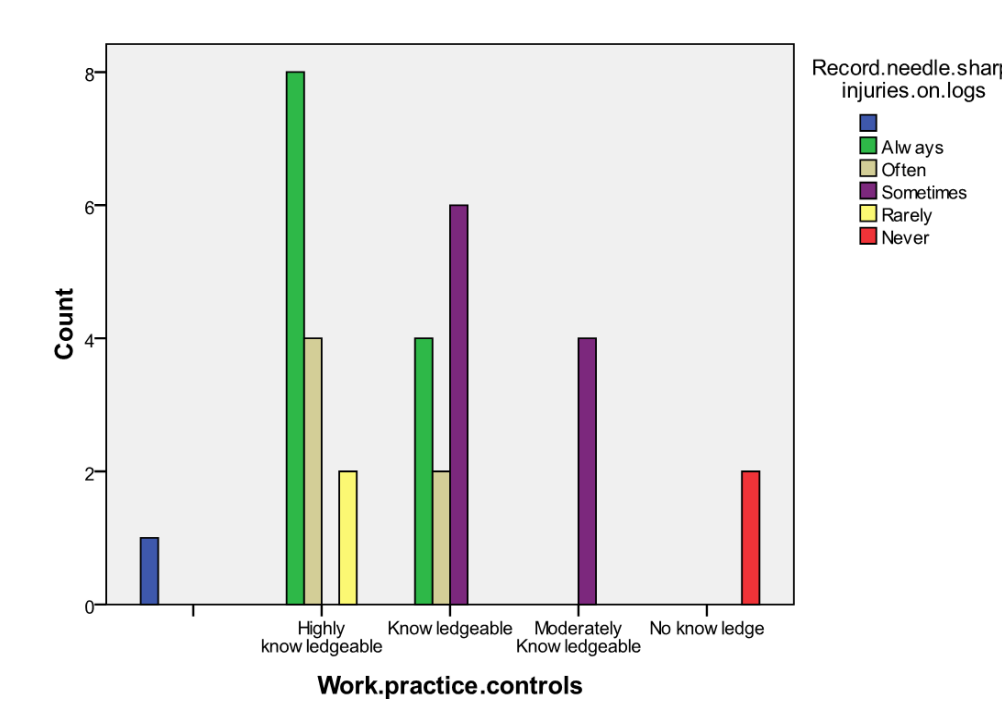
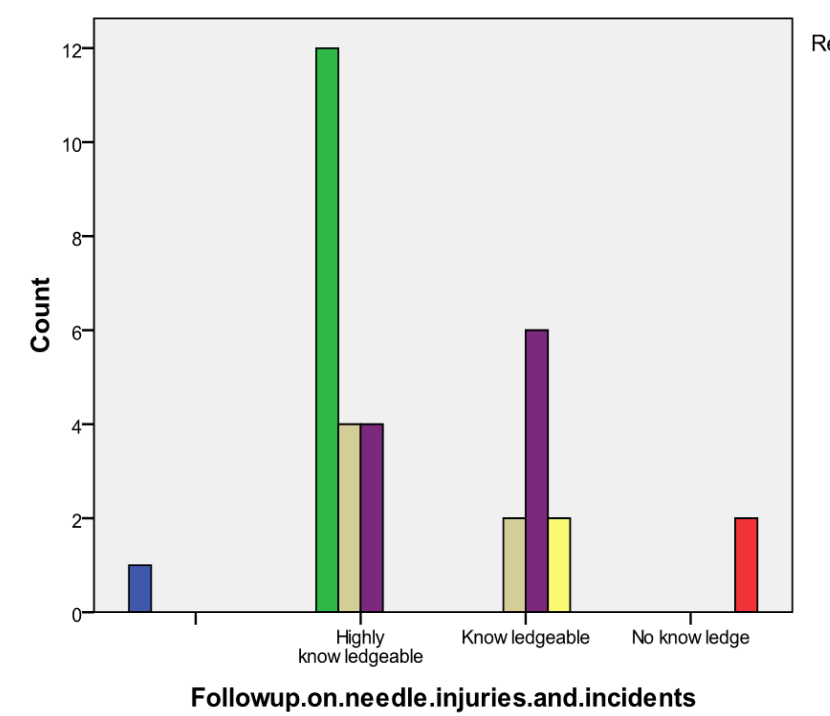
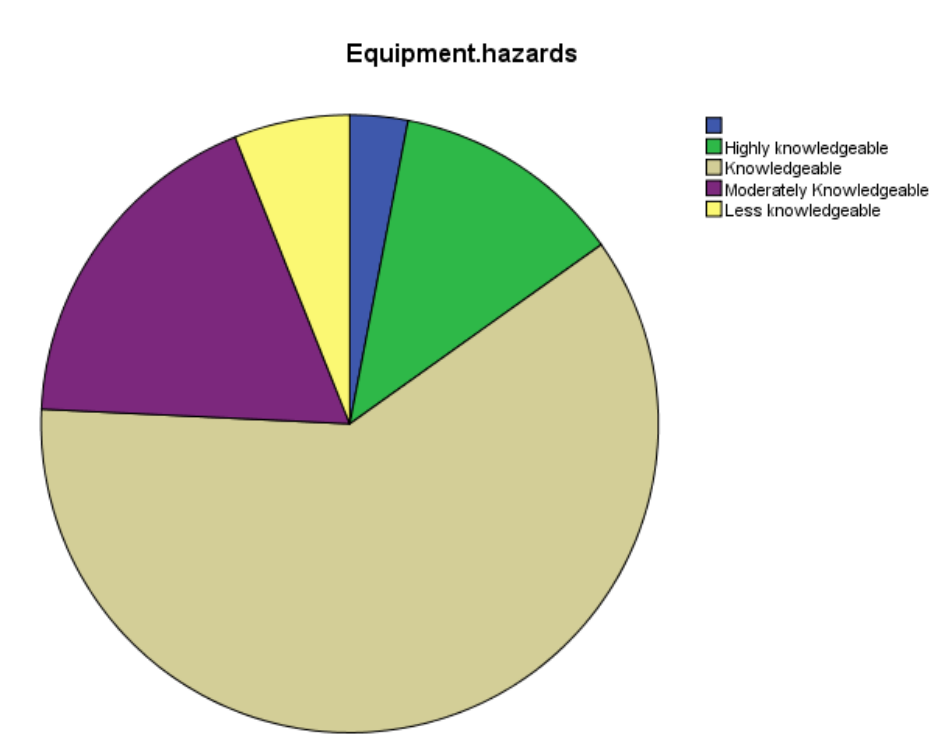
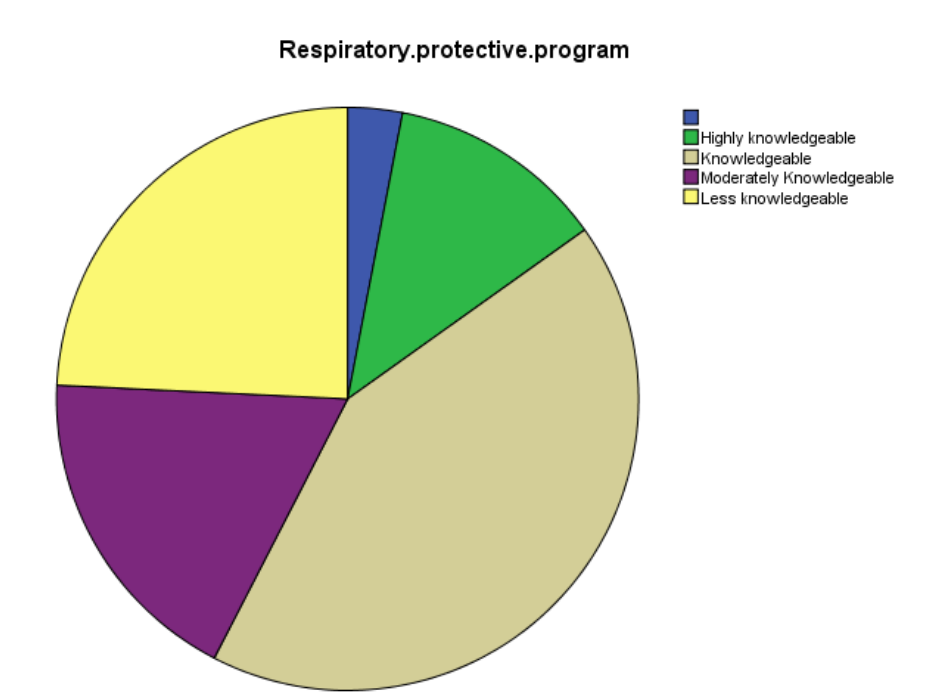
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## Results

### Demographic Data:

S#	Categories	Out of 32	Percentage (100%)	
1	Gender	Male	8	23
		Female	25	74
2	Age	20-25	26	81.3
		26-30	6	18.8
		31 & above	0	0
3	Marital Status	Single	28	84
		Engaged	0	0
		Married	4	12
		Divorced	0	0
		Widow	0	0
4	Experience as nurse	1 month	0	0
		2 months	0	0
		3 months	32	100
5	Experience as Emergency nurse	< 1 month	6	18.8
		1 month	20	62.5
		>1 month	6	18.8
6	Professional Education	BScN	30	93
		RN	2	3
		Diploma in Nursing	0	0
		Diploma in Nursing & Midwife	0	0
7	Job type	Full time	32	100
		Part time	0	0
8	Shift	Morning	22	66.7
		Evening	8	24.2
		Night	2	6.1

### Knowledge in % among nurses:



### Pearson Chi-Square Value among variables:

S #	Knowledge p-value	Practice					
		Practice Universal Precautions	Record needle sharp injuries on log	Report Slips and Obstructions	Isolate patients with suspicious or confirmed TB	Alert for suspicious situation and report them	Use of Defibrillator
1	Work Practice control protocols	0.001	0.001	0.002	0.001	0.001	0.001
2	Follow up on needle injuries and incidents	0.001	0.001	0.05	0.05	0.001	0.001
3	Slip, Trips and Falls	0.000	0.001	0.002	0.001	0.001	0.05
4	Tuberculosis Protocols	0.001	0.001	0.05	0.001	0.05	0.001
5	Security management program	0.05	0.05	0.001	0.001	0.002	0.05
6	Respiratory protective program	0.001	0.001	0.001	0.02	0.02	0.001