



# “A Study To Assess The Knowledge Related To Universal Precaution To Be Followed During Clinical Posting Among First Year Nursing Students In Selected College Of Nursing, Maharashtra.”

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## ABSTRACT:

**INTRODUCTION: Background of the study:** Infection prevention and control are critical considerations for all sorts of health care organizations. Infection control practitioners are typically nurses who have received advanced training in infection control procedures and the spread of infections. An assessment of healthcare personnel' knowledge, attitude, and practice of standard precautions is required before launching and implementing an effective infection prevention and control strategy in any health facility. Knowledge, training, and a high-risk perception have all been linked to increased compliance with conventional precautions among health workers.<sup>4</sup>

**Objective:** The objective of the study was used to assess the knowledge on universal precaution among first year nursing students. A descriptive design was used to assess the knowledge on universal precaution among randomly selected 120 first year nursing students at selected college of nursing Maharashtra. A SAQ was used to collect the data from first year nursing students regarding universal precaution. The first-year nursing students were the samples selected by stratified random sampling technique and data was collected by using universal precaution Questionnaire with Self-Administered Questionnaire. The analysis was done by using descriptive and inferential statistics. **Results:** universal precaution from the findings, it was observed that most of the first-year nursing students had 52% very good knowledge score, 21% good knowledge score and none had either poor knowledge on universal precaution. Further, the Knowledge score on universal precaution shows that 62 first year nursing students out of 120 had very good knowledge with a mean score of  $21.4 \pm 1.7$  whereas none of them had poor knowledge on universal precaution. However, there is a no significant association ( $p > 0.05$ ) between knowledge score and age, gender, qualification, area of residence, religion of first year nursing students. Findings of study revealed that the most of the first-year nursing students had very good knowledge on universal precaution.

Further, the knowledge of first year nursing students was more or less similar after comparison on universal precaution at selected college of nursing, Maharashtra.

**Conclusion:** Thus, it was concluded that the most of the first-year nursing students had very good knowledge on universal precaution. Further, the knowledge of first year nursing students was more or less similar after comparison on universal precaution at selected college of nursing, Maharashtra.

**KEYWORDS:** universal health-care precautions (UHP), Needle Stick Injury (NSI), Self-Administered Questionnaire.

## **INTRODUCTION:**

The term universal basic precautions UBP was introduced in 1985 by Garner. He defined it as: “the prevention of transmission of blood borne pathogens like HIV through strict respect by health workers of rules concerning care and nursing.” The HIV/AIDS epidemic is firmly rooted in every country all over the world today. Currently people worldwide are living with HIV. For the health professional, in addition to contact with infected semen, blood and blood products, HIV infection can also be acquired through exposure to other contaminated body fluids such as CSF, pericardial/ pleural fluids and amniotic fluids.<sup>1</sup>The World Health Organization estimates that these exposures cause approximately 2.5% of HIV cases and 40% of hepatitis B and C cases among healthcare workers globally.<sup>2</sup> A needle stick injury (NSI) is a skin-penetrating stab wound caused by a hollow-bore needle (or other sharp) containing another person's blood or body fluid. Sharps injury (SI) is described as a stab wound to the skin produced by sharp instruments or accidents in a medical setting.<sup>3</sup>

## **OBJECTIVES:**

The objectives of the study are:

The primary objective of the study was to assess the knowledge related to universal precaution to be followed during clinical posting among first year nursing students in selected college of nursing, Maharashtra.

## **SECONDARY OBJECTIVES**

1. To assess the existing knowledge among nursing students regarding universal precaution.
2. To evaluate the knowledge regarding universal precaution.
3. To find out the association between knowledge score and selected demographic variables.

## **MATERIALS AND METHODS:**

A descriptive design was used to assess the knowledge on universal precaution among first year nursing students at selected college of nursing, Maharashtra. A stratified random sampling was used to select 120 samples. To collect data on demographic variables & universal precaution, a self-administered questionnaire was used among first year nursing students. Further, the collected data were analyzed in accordance with the objectives and hypothesis of research question.

## **STATISTICAL ANALYSIS:**

The Collected data was planned to analyze by using descriptive and inferential Statistics. The descriptive statistics includes; percentage, Mean, mean% and standard deviation. And the Inferential statistics includes; F test to test the hypothesis and one-way ANNOVA using SPSS software

**RESULTS:****Table 4.1.1: Distribution of first year nursing students according to their Demographic variable**

AGE	Count	Average	Variance	F	P-value
a	53	18.6	28.2	2.109368	0.102819
b	31	16.6	27.0		
c	26	17.7	34.4		
d	10	21.2	17.5		
<b>Gender</b>					
a	3	13.3	56.3	2.459675	0.119481
b	117	18.3	28.3		
<b>Qualification</b>					
a	20	9.3	1.6	360.7161	0
b	30	14.8	5.6		
c	70	22.1	4.2		
<b>Area of Residence</b>					
a	79	18.0	32.8	0.373657	0.689031
b	12	19.4	27.9		
c	29	18.0	20.9		
<b>Religion</b>					
a	55	18.7	27.7	1.525543	0.211589
b	30	17.3	23.8		
c	23	16.7	41.3		
d	12	20.1	22.3		

**Table 4.2.1: Assessment of the knowledge of first year nursing students on universal precaution.**

Level of Knowledge	Frequency	%	Mean	SD
Poor	0	0%	0.00	0.00
Average	23	19%	9.3	1.23
Good	25	21%	15.2	1.55
Very Good	62	52%	21.4	1.73
Excellent	10	8%	25.4	0.70
<b>Overall</b>	<b>120</b>	<b>100%</b>	<b>14.3</b>	<b>0.70</b>

Percentage distribution of knowledge scores of first year nursing students according to their level of knowledge shows that out of 120 health care workers, 62 of them had very good knowledge (52%), 23 of them had average knowledge (19%) whereas none had either poor knowledge on universal precaution. However, 25 first year nursing students had good knowledge (21%) and 10 first year nursing students had excellent knowledge on universal precaution. (table - 4.2.1). Hence, it can be interpreted that majority of the first year nursing students had very good knowledge on universal precaution.

**Table 4.2.2: Overall percentages mean standard deviation and mean % of knowledge on universal precaution among first year nursing students.**

Area	Item No	MEAN %	MEAN	SD
A	4	62%	2.48	1.04
B	8	63%	5.04	1.62
C	10	58%	5.76	2.44
D	8	61%	4.85	1.25
<b>OVERALL</b>	<b>30</b>	<b>61%</b>	<b>4.53</b>	<b>0.62</b>

Distribution of mean knowledge score on universal precaution shows the 62 first year nursing students had very good knowledge with a mean score of  $21.4 \pm 1.7$ , 23 first year nursing students had average knowledge with mean score of  $9.3 \pm 1.2$  whereas none of them had poor knowledge on universal precaution. However, 25 first year nursing students had good knowledge with a mean score of  $15.2 \pm 1.5$  and 10 first year nursing students had excellent knowledge with mean score of  $25.4 \pm 0.7$  on universal precaution (table - 4.2.2). Hence, it can be interpreted that majority of the health care workers had very good knowledge on universal precaution

### 4.2.3. Item wise analysis of knowledge scores of first year nursing students on universal precaution.

Items	Right Answer	Percentage
Item 1	103	86%
Item 2	55	46%
Item 3	83	69%
Item 4	57	48%
Item 5	86	72%
Item 6	54	45%
Item 7	100	83%
Item 8	67	56%
Item 9	75	63%
Item 10	83	69%
Item 11	63	53%
Item 12	77	64%
Item 13	50	42%
Item 14	91	76%
Item 15	53	44%
Item 16	89	74%
Item 17	52	43%
Item 18	80	67%
Item 19	72	60%
Item 20	68	57%
Item 21	81	68%
Item 22	55	46%
Item 23	87	73%
Item 24	52	43%
Item 25	82	68%
Item 26	76	63%
Item 27	58	48%
Item 28	74	62%
Item 29	67	56%
Item 30	86	72%

Item wise analysis depicts that majority (63%) of first year nursing students have given correct response to the knowledge items related to chain of infection whereas only 58% of them have given correct response to the knowledge items related components of universal precaution. However, the percentages of other item range from 59% - 62% (table 4.2.4). Hence it was interpreted that the knowledge of first year nursing year students on universal precaution was more or less similarly distributed between the items of chain of infection and components of universal precaution.

**DISCUSSION:** Distribution of first year nursing students according to their demographic variables. The age of first year nursing students shown that the highest percentage (44%) of them belonged to the age group of 16–17 years whereas the first-year nursing students with 17-18 years were 26%. However, first year nursing students with the age group of 18-19 years were 22%. Gender distribution depicts that the majority (98%) of first year nursing students were females when compared to males. The area of residence of first year nursing students depicts that more than half of them (66%) were resident of urban area whereas the first year nursing students with area of residence as rural were 24%. However, the first

year nursing students with area of residence as slum were 10%. Distribution of first year nursing students according to religion shows that; 46% of them were Hindus whereas the first year nursing students with Muslim were 25%, Christian were 10%. However, the first-year nursing students with Buddhist religion were about 19%.

**CONCLUSION:** From the findings of present study, it was concluded that the most (62) of the first-year nursing students had 52% very good knowledge score, 21% had good knowledge score, 19% had good knowledge score and none of them had either poor knowledge on universal precaution. Further, the Knowledge score on universal precaution shows the 62 first year nursing students had very good knowledge with a mean score of  $21.4 \pm 1.7$  whereas none of them had poor knowledge on universal precaution. However, there is a no significant association ( $p > 0.05$ ) between knowledge score and age, gender, qualification, area of residence, religion of first year nursing students. Thus, it was concluded that the most of the first-year nursing students had very good knowledge on universal precaution. Further, the knowledge of first year nursing students was more or less similar after comparison on universal precaution at selected college of nursing, Maharashtra.

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