

## **Assess the factors influencing compliance with standard precaution during patient care among nurses.**

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### **Abstract**

*Nursing professionals are the most numerous contingent among health professionals who provide direct care to patients, making them vulnerable to the risks of biological exposure during medical practice. The aim of the study is to determine the factors influencing compliance with standard precaution during patient care among nurses. Descriptive design was used. 60 samples who met the inclusion criteria were selected by using convenience sampling technique. It was observed that the work related factors has higher influencing level of 66.67% than the others. The demographic variable association revealed that responsibility of the nurse had shown statistically significant association with level of factors influencing compliance with standard precaution during patient care among nurses at  $p < 0.05$  level.*

**Keyword:** *factors influencing, compliance, standard precaution, patient care, nurses*

### **INTRODUCTION**

The term standard precaution implies that anybody fluid may contain contagious and harmful microorganisms. The basic principles of infection control has been applied by the practice of standard precaution which mainly aims to reduce the risk of cross infection through the performance of hand hygiene, use of personal protective equipments (PPE) such as gloves, gowns, goggles, masks, handling and disposal of sharp instruments and waste to prevent direct contact from pathogen from either patient or nurse.

Nurses and midwives are more prone to acquiring infections from patients especially blood borne diseases including HCV, HBV, and HIV / AIDS because they are directly involved in patient care. It has been estimated worldwide that more than 71 million people are living with chronic Hepatitis C infection and about 70 million are living with HIV / AID.

A study done in Mongolia on needle stick and sharps injuries revealed that one third of the health care workers did not follow universal precautions at the tertiary hospital in

Ulaanbaatar. Unsafe injection practices such as reusing and recapping needles after giving injections were still observed among them Mayo & Nayu, (2011). Nurses are at risk of acquiring and transmitting hospital acquired infections in the course of delivering the nursing care. Therefore measures to prevent the transmission of these infectious microorganisms are a significant component of nursing care. This prevention is achieved through the practice of infection prevention, including the implementation of infection prevention standard precautions (SPs) (Amadu & Saka, 2012). The investigator during her clinical experience had observed the poor compliance of the nurses with the standard precautions while giving caring for the patients. The Nurses need to take care of their health by preventing the possible cause of infections through the use of standard precaution. Hence the investigator undertook the present study to determine the factors influencing nurse's compliance with standard precaution during patient care.

## **MATERIALS AND METHODS**

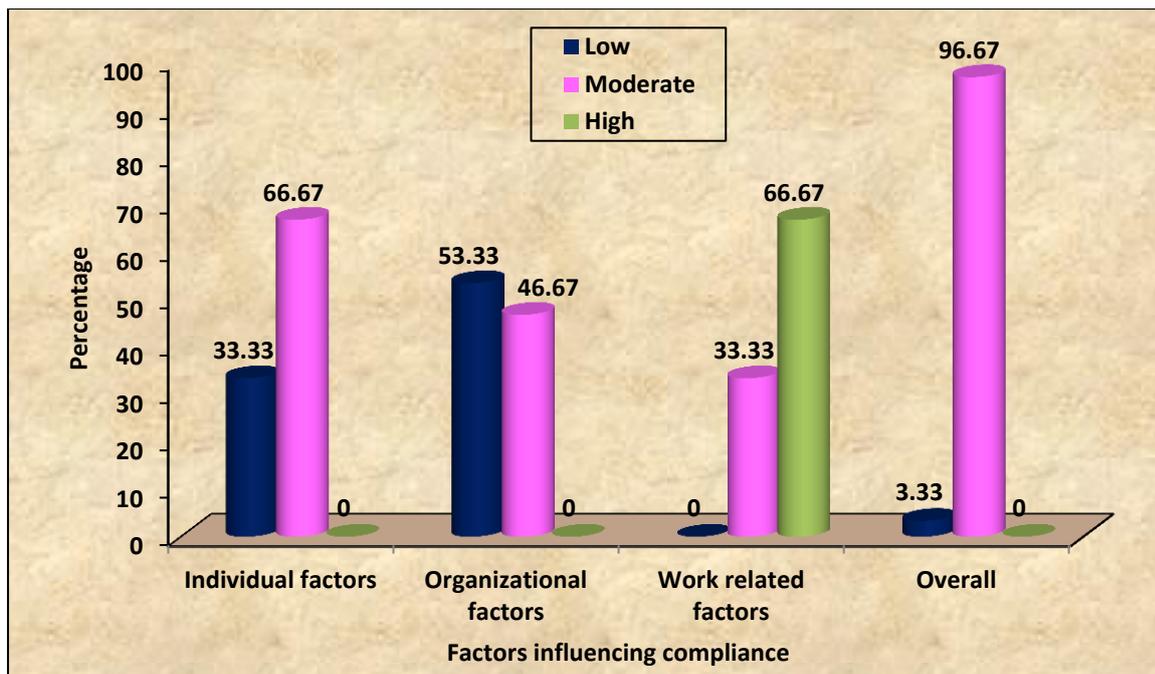
### **Study area**

The study was conducted in Saveetha Medical College Hospital, Thandalam, Chennai. It is located 13 kilometres away from Poonamalle, Kanchipuram district, Chennai, Tamil Nadu India. It is a 1200 bedded Multi- Speciality hospital with bed capacity of 30 in Obstetrics and Gynaecology ward and bed capacity 16 in immediate postoperative ward and the outpatient department receives a patient flow of 50 per day.

### **Study site**

Quantitative research approach was used to assess the factors influencing nurse's compliance with standard precaution during patient care. The investigator after obtaining permission from the Institution, and Ethical clearance from the ethical committee of the institution, 60 samples who met the inclusion criteria were selected by using convenience sampling technique. 3 to 4 samples working in day shift were selected each day. The purpose of the study was explained to the samples and written informed consent was obtained from them. Self-administered questionnaire was used to collect the data. Analysis was done using descriptive and inferential statistic.

## **RESULTS AND DISCUSSION**



**Fig 1 : Percentage distribution of level of factors influencing compliance with standard precaution during patient care among nurses**

**Table 1: Mean and standard deviation of factors influencing compliance with standard precaution during patient care among nurses.**

**N = 60**

<b>Influencing Factors</b>	<b>Mean</b>	<b>S.D</b>	<b>Minimum</b>	<b>Maximum</b>
Individual factors (35)	18.5	1.81	15.0	22.0
Organizational factors (40)	20.27	2.56	15.0	27.0
Work related factors (25)	19.17	1.18	17.0	21.0
<b>Overall (100)</b>	<b>57.93</b>	<b>3.34</b>	<b>50.0</b>	<b>67.0</b>

Table 1 depicts that with respect to individual factors the mean score was  $18.5 \pm 1.81$  with minimum score of 15.0 and maximum score of 22.0. With regard to organizational factors, the mean score was  $20.27 \pm 2.56$  with minimum score of 15.0 and maximum score of

27.0. Considering the work related factors, the mean score was  $19.17 \pm 1.18$  with minimum score of 17.0 and maximum score of 21.0. The overall factors influencing revealed that, the mean score was  $57.93 \pm 3.34$  with minimum score of 50.0 and maximum score of 67.0.

**Table 2: Association between level of factors influencing compliance with standard precaution during patient care among nurses with their selected demographic variables.**

Demographic Variables	Low influencing ( $\leq 50\%$ )		Moderate influencing (51 – 75%)		Chi-Square Value
	No.	%	No.	%	
<b>Age in years</b>					$\chi^2=0.259$ d.f=1 p = 0.511 N.S
20 - 29	2	3.3	46	76.7	
30 - 39	0	0	6	20.0	
40 - 50	-	-	-	-	
<b>Sex</b>					-
Male	-	-	-	-	
Female	2	3.33	58	96.7	
<b>Nursing educational level</b>					$\chi^2=1.552$ d.f=3 p = 0.670 N.S
ANM	0	0	6	10.0	
GNM	0	0	26	43.3	
B.Sc. Nursing	2	3.3	22	36.7	
P.B.B.Sc. Nursing	0	0	4	6.7	
<b>Years of service as a nurse</b>					$\chi^2=0.259$ d.f=2 p = 0.879 N.S
0 - 5 years	2	3.3	46	76.7	
6 - 10 years	0	0	4	6.7	
11 - 15 years	0	0	8	13.3	
16 years and above	-	-	-	-	
<b>Responsibility of the nurse</b>					$\chi^2=6.724$ d.f=2 p = 0.035 S*
Senior nurse	0	0	8	13.3	
Junior nurse	0	0	44	73.3	
Ward in charge	2	3.3	6	10.0	

\*p<0.05, S – Significant, N.S – Not Significant, N = 60

The table 2 shows that the demographic variable responsibility of the nurse had shown statistically significant association with level of factors influencing compliance with standard precaution during patient care among nurses at p<0.05 level.

## DISCUSSION

The study finding revealed that majority of the factors that influence the compliance with standard precaution is work related factors which can be due to busy work schedule, emergencies and increased patient census. The study was supported by Piai-Morais et al., (2015) who

conducted a study on Factors influencing adherence to standard precautions among nursing professionals in psychiatric hospitals. The study revealed that Knowledge of the precautions received a high score (4.69); adherence received (3.86) and obstacles (3.78), while intermediaries and the scales of organizational factors received low scores (2.61). There was a strong correlation between the magnitude adherence scale and the personal protective equipment availability ( $r = 0.643$ ;  $p = 0.000$ ). The training scale for prevention of HIV exposure ( $p = 0.007$ ) was statistically different between the nurses and nursing assistants. Thus the study concluded that the organizational factors negatively contributed to adherence to standard precautions, indicating that psychiatric institutions lack safe working conditions, ongoing training and management actions to control infections.

The study was supported by Aung et al., (2017) who conducted a study on factors affecting the compliance of Myanmar nurses in performing standard precautions. The study revealed that almost respondents (91.18%) had a good knowledge of prevention standards and 73.5% of respondents had good adherence in taking standard precautions. The results showed that nurse characteristics did not significantly affect adherence to standard precautions with statistical test results as follows: age ( $p = 0.97$ ), gender ( $p = 1.00$ ), religion ( $p = 0.72$ ), education ( $p = 0.85$ ), work experience at SHW ( $p = 0.84$ ), education training program ( $p = 0.71$ ), knowledge ( $p = 0.76$ ), and needle stick injury ( $p = 0.17$ ). There was a significant influence between adherence to standard precautions and the incidence of injury due to needle puncture with  $p$ -value = 0.01.

## **CONCLUSION**

The findings shows that the demographic variable responsibility of the nurse had shown statistically significant association with level of factors influencing compliance with standard precaution during patient care among nurses at  $p < 0.05$  level. Thus the study findings shows that work related such as busy work schedule, increased patient census and emergencies situations were the most influential factors. Thus the study concluded that the relevant authorities and hospital infection control department should pay more attention to nurse compliance with standard precautions.

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