

Nurses Knowledge on Standards Precautions

Pallavi Biswas

Abstract

Introduction: The World Health Organization (WHO) estimated that, of the 35 million health care workers worldwide, 3 million experiences percutaneous exposures to blood borne pathogens each year. Among these exposed health care professionals, 2 million were exposed to HBV, 0.9 million to HCV, and 170,000 to HIV. It is seen that mostly the injuries occurs in developing countries. All health care workers need to be aware of their individual responsibility for maintaining a safe care environment for patients and staff. Every healthcare worker needs to be clear about their specific responsibility for cleaning equipment and clinical areas.

Objective: The present study was to assess the knowledge regarding standard precaution among staff nurses. To assess the effectiveness of structured teaching module regarding standard precautions.

Materials and Methods: Quantitative evaluative research approach was employed with true experimental, pre and post-test research design. The sample consisted of 30 staff nurses, selected using convenient sampling technique.

Results: Result of the present study revealed that after structured teaching program out of 30 staff nurses 25(83.33%) of the participants have Good knowledge, whereas 5(16.67 %) had Average knowledge, The data depicts that the obtained t value was 10.76 and p value 0.001.

Keywords: Standard precautions; Staff nurses; Knowledge; Infection.

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Background of the Study

Infection is an occupational risk for health care staff. Exposure to blood and body fluids from infected patient poses a risk of infection with hepatitis B, C or HIV, covid-19 virus to health care staff. Globally it is estimated that about 39% of HCV and 37% HBV infections and 4.4% of HIV infection in health care workers are attributable to occupational sharps exposure.⁴

The World Health Organization (WHO) estimated that, of the 35 million health care workers worldwide, 3 million experiences percutaneous exposures to blood borne pathogens each year. Among these exposed health care professionals, 2 million were exposed to HBV, 0.9 million to HCV, and 170,000 to HIV. It is seen that mostly the injuries occurs in developing countries.⁵

In 1996 the CDC included the universal precaution in a new prevention concept called standard precaution. Standard precaution is a group of infection prevention practices that apply to all patients regardless of their presumed infection status. Standard precautions are the practice for routine work for all the health care workers including staff nurse.

Standard precaution includes hand hygiene, use of Personal Protective Equipment (PPE), safe management and disposal of sharps, cleaning

Author Affiliation

Professor, College of Nursing, Padhar, Padhar Hospital, Betul, Madhya Pradesh 460001, India.

Corresponding Author

Pallavi Biswas, Professor, College of Nursing, Padhar, Padhar Hospital, Betul, Madhya Pradesh 460001, India.

E-mail: pallavibishwas14@gmail.com

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and decontamination of reusable equipment. Hand hygiene is a major component of standard precaution and one of the most effective methods to prevent transmission of pathogens associated with health care.¹

Need of the Study

Standard precaution is meant to reduce the risk of transmission of blood borne and other pathogens. According to a cross section research study done in a tertiary care hospital in Delhi among 322 health care workers reported a large percentage (79.5%) reported having one or more needle stick injury in their work experience, most of injuries (34.40%) were occur during recapping of needle.³

All health care workers need to be aware of their individual responsibility for maintaining a safe care environment for patients and staff. Every healthcare worker needs to be clear about their specific responsibility for cleaning equipment and clinical areas.²

Two million people each year become ill as a result of a hospital-acquired infection. Approximately two million people per year get nosocomial infection due to improper standard precautions. Proper hand hygiene is critical to the prevention of these infections which contribute to the death of nearly 90,000 hospital patients per year and 5 billion in medical expenses. (HHRC., 2009).

On march 2020, WHO recommended regarding PPE that HCWs collecting nasopharyngeal or oro pharyngeal swab specimens from suspected or confirmed COVID-19 patients should be well trained on the procedure and should wear a clean, non sterile, long sleeve gown, a medical mask, eye protection (goggles or face shields) and gloves. Procedure should be conducted in a separate/ isolation room and during nasopharyngeal specimen collection HCWs should request the patient to cover mouth with a medical mask or tissue. On 19th march 2020, WHO gave the 1st edition of guidance on infection prevention and control strategies.⁶

The health care workers are the key functional members in present scenario worldwide. It is essential for every HCW to equip with sound knowledge of standard Precautions. As the whole world is facing a deadly virus with presently no proper treatment, safety precaution is only treatment and prevention. The knowledge of Health Care Worker regarding Standard Precautions is the base of good health and safety of the entire nation. The researcher felt a need to assess the knowledge

of staff nurses regarding standard precautions because of changing need and new deadly virus in the field of health care system. Proper knowledge and skilled practice of all nurses and health care worker is the key area to deal with present scenario. Lack of knowledge and practice will make put the life threatening danger on not only clients but among health care workers.

Statement of Problem

A study to assess effectiveness of Structured Teaching Module regarding standard precaution among staff nurses of Padhar Hospital, Betul Madhya Pradesh.

Objectives of the Study

- To assess the knowledge regarding standard precaution among staff nurses.
- To assess the effectiveness of structured teaching module regarding standard precautions.

Hypothesis

H1: The staff nurses having a good knowledge regarding standard precaution.

H2: There will be significant difference between pre- test and post -test in the level of knowledge regarding standard precautions among nursing staff after Structured Teaching Module.

Material and Method

Research approach: Quantitative Evaluative approach is considered to be most appropriate.

Research design: True Experimental research design of pre and post test with control group.

Setting of the study: The study was conducted at Padhar Hospital Betul.

Target Population: The target population of the study consist of Staff nurses working in Padhar hospital.

Sample: The sample for the present study comprises of 30 staff nurses working in Padhar hospital.

Sampling Technique: Convenient sampling technique was being adopted for the present study.

Development of Tool for Data Collection: A set of self administered knowledge questionnaires used to collect data from staff Nurses regarding standard precautions. Based on the objective of the study the data collection tools were selected in order to

obtain necessary data. The tool has two sections i.e., section A and B.

Section A: Socio Demographic characteristics.

Section B: Knowledge Questionnaire on standard precautions it consist of ;

- Hand hygiene
- Hospital acquired infection
- Needle stick injury
- Personnel protective equipments
- Information related to Covid 19 precautions.

Section C: Structured teaching module on standard precautions.

- Structured teaching module for staff nurses , was developed on the review of the literature and the objectives state for knowledge of standard precautions. The investigator prepare the Structured Teaching Module on Standard Precautions was include following area;
- Standard precautions
- Hospital acquired infection
- Uses of personal protective equipment (new Guidelines).

Structured Teaching Module lasting for 45 minute followed by 1 hr of practice session. That helps to improve the knowledge of staff nurses regarding standard precautions.

Plan for Data Analysis

- The data were tabulated and analyzed using descriptive statistics like mean, standard deviation, frequency distribution and percentage. Inferential statistics like paired t-test, and Chi-square test.

Result

Analysis and interpretation of data collected from 30 samples to find the effectiveness of structured teaching module regarding standard precautions.

The data presented in the Table 1 show that out of 30 subjects majority 21 (70%) staff nurses belonged to age group of 20-30 years, whereas almost similar majority 19 (63.33%) were females, highest percentage 25(83.33%) of staff nurses are GNM, Majority 23(76.66%) staff nurses having 0-5 years of experience and 19(63.33%) had some additional qualification apart from their nursing program.

Table 1: Frequency and percentage distribution of sample characteristics with selected demographic variables.

(N =30)

S.no		Frequency	Percentage
1.	Age (in years)		
	20-30	21	70%
	31-40	8	26.66%
	41-50	0	0%
	51 and above	1	3.33%
2.	Gender		
	Male	11	36.66%
	Female	19	63.66%
3.	Qualification		
	ANM	1	3.33%
	GNM	25	83.33%
	B. Sc Nursing	4	13.33%
	M. Sc Nursing	0	0%
4.	Year of Experience		
	0-5 years	23	76.66%
	5-10 years	3	10.00%
	10-15 years	3	10.00%
	15 years and above	1	3.33%
5.	Additional Qualification		
	Yes	19	63.33%
	No	11	36.66%

Effectiveness of Structured Teaching Module

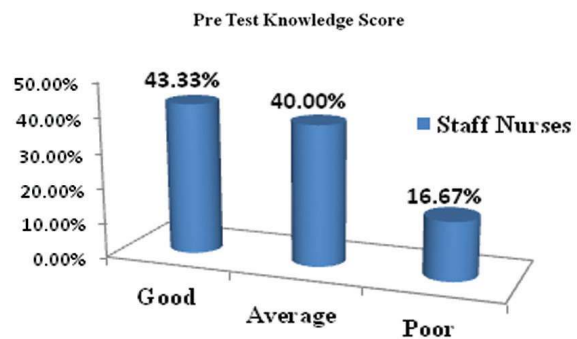


Fig. 1.1: Shows that out of 30 staff nurses 13(43.33%) of the participants have Good knowledge, whereas almost similar 12(40%) had Average knowledge and only 5(16.67 %) have Poor knowledge regarding standard precautions.

Effectiveness of structured teaching module regarding standard precautions among staff nurses.

In order to find the effectiveness of structured teaching module one standard precaution the following hypothesis was stated H2: There will be

significant difference between pre-test and post-test in the level of knowledge regarding standard precautions among nursing staff after Structured Teaching Module. Parametric paired t test was preferred.

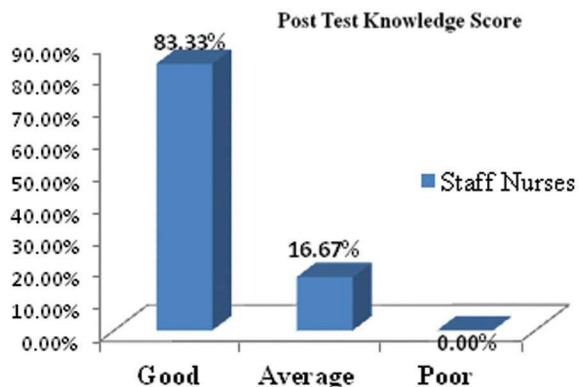


Fig. 1.2: shows that out of 30 staff nurses 25(83.33%) of the participants have Good knowledge, whereas 5(16.67 %) had Average knowledge and no staff nurses have Poor knowledge regarding standard precautions after implementations of structured teaching module regarding standard precautions among staff nurses.

Table 2: Comparison between pre and post score.

(n=30)					
Group	Mean	Mean Difference	SD	DF	t value
pre test	16.33		4.84		
		7			
post test	23.33		3.27	29	8.7

*P≤0.05 **P≤0.01 ***P≤0.001

The data depicts in Table 2 shows that the obtained t value was 10.76 and p value 0.001. hence H1 was accepted and it is interpreted that self esteem has significantly improved compared to pre test. Thus it can be concluded that Self Esteem Enhancement Program for Nursing Students (SEPNS) found effective to enhance the self esteem among undergraduate nursing students.

Conclusion

Majority13(43.33%) of the participants have Good knowledge, whereas almost similar 12(40%) had

Average knowledge and only 5(16.67 %) have Poor knowledge regarding standard precautions, prior to the administration of structured teaching module. Whereas 25(83.33%) of the participants have Good knowledge, 5(16.67%) had Average knowledge and no staff nurses have Poor knowledge regarding standard precautions after implementations of structured teaching module regarding standard precautions among staff nurses.

Summary

The present study was undertaken by the investigator to evaluate the effect of structured teaching module on standard precautions among staff nurses. Standard precaution includes hand hygiene, use of Personal Protective Equipment (PPE), safe management and disposal of sharps, cleaning and decontamination of reusable equipment. Proper knowledge and skilled practice of all nurses and health care worker is the key area to deal with present scenario.

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