

# Effectiveness of Planned Teaching Programme on Knowledge Regarding Needle Stick Injury among the Staff Nurses

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## Abstract:-

### ➤ Background

A Needle stick Injury is a percutaneous piercing wound typically set by a needle point, But possible also by other sharp instruments or objects. Commonly encountered by people handling needles in the medical setting, such injuries are an occupational hazard in the medical community.

### ➤ Aim

Assess the effectiveness of planned teaching programme on knowledge regarding needle stick injury among the staff nurses.

### ➤ Materials and methods

It was a one group pretest post test pre experimental among 50 staff nurses working in HSK hospital and Research centre Bagalkot. The sample was selected by convenient sampling technique. The data was collected by structured questionnaire prepared by the researcher. The effectiveness of PTP was determined by using paired t test.

### ➤ Results

In pre-test out of 50 subjects 21 (42%) had average knowledge 29 (58%) subjects with poor knowledge regarding needle stick injury. Where as in post test out of 50 subjects 8% had excellent knowledge, 68% had good knowledge, and remaining 24% had average knowledge and no subjects were found in the category of poor or very poor knowledge.

### ➤ Conclusion

The PTP prepared and administered by researcher was successful in improving the knowledge of staff nurses regarding prevention of needle stick injury so such educational programmes must be conducted regularly for updating the knowledge of staff nurses to keep them safe.

**Keywords:-** Needle stick injury, staff nurses, questionnaire, planned teaching programme and occupational hazards.

## I. INTRODUCTION

Needle stick injuries and cuts are the common occupational accidents exposing health care workers to blood and body fluids. These preventable injuries expose workers to over 20 different blood borne pathogens and result in an estimated 1000 infections per year. The most common are hepatitis B, hepatitis C, and human immune deficiency virus<sup>1</sup>.

According to world health report 2012 published by WHO, needle stick injury is accountable for 40% of hepatitis B, 40% of Hepatitis C and 2% of HIV infections. The risk of exposure of health care workers to blood borne pathogens has led to the development of needle devices or special needle safety devices<sup>2</sup>.

Needle stick injury causes a high burden of death and disability among health care workers. Available statistics probably underestimate the severity of the problem because many cases go unreported as workers do not report their injuries. This makes it difficult to know exactly how serious the problem is or how all preventive program works.<sup>3</sup>

Accidental needle-sticks account for 86% of all occupationally related infectious disease transmission. The total number of needle stick injuries that the average nurse in India experience is likely to be higher, given the absence of training and protective devices, thus increasing the total exposure to possibly infected or body fluids<sup>4</sup>. To control this kind of needle stick injuries the nurses must have adequate knowledge and practice related to medication administration.

## II. OBJECTIVES OF THE STUDY

- Assess the knowledge of staff nurse regarding prevention of needle stick injury.
- To assess the effectiveness of planned teaching program on prevention of needle stick injury among staff nurses.
- To find association between knowledge regarding prevention of needle stick injury and selected socio – demographic factors of staff nurses.

### III. MATERIALS AND METHODS

The study was conducted with evaluative research approach with a pre experimental one group pre test post test design. The sample of 50 staff nurses was selected from Hanagal shri Kumareshwar hospital and research center Bagalkot. The sample was selected by convenient sampling technique. The dependent variable was knowledge level of staff nurses regarding prevention of needle stick injury. The independent variable was planned teaching program on knowledge regarding prevention of needle stick injury among the staff nurses. Socio demographic variables were to age, gender, educational status, year of experience, experience of NSI. The data was collected by self- administered structured questionnaire method. The questionnaire consisted two parts, Part 1 consisted 4 items on socio demographic factors and part 2 consisted 30 items to assess the knowledge of staff nurses on needle stick injury. The questionnaire was distributed to staff nurses those who were present at the time of data collection. The researcher gave the instruction regarding questionnaire and each subject took about 15 to 20 minutes to tick the answer.

### IV. INTERVENTION

A planned teaching programme was designed and developed by the investigator according to the experts opinions. The contents of PTP were definition, causes, management, and prevention of needle stick injury. The planned teaching programme was prepared in English language.

The data was analyzed by using both descriptive and inferential statistics. Demographic data was analyzed by using frequency and percentage distribution. Mean and standard deviation and paired 't' test were used to find the difference between pre test and posttest knowledge score of staff nurses. Chi square test was used to determine association between post test knowledge scores with their selected demographic variables of staff nurse.

### V. RESULTS

Among 50 staff nurses 62% were in the age group of 26-30 years and 34 % were in the age of 22-25, 80% were males, 88% had educational qualification up to GNM, 42% of subjects had 4 - 6 years of experience and 74% of nurses reported to have experienced needle stick injury at least once in their carrier.

In pre test out of 50 staff nurses 21 (42%) had average and 29 (58%) subjects with poor regarding needle stick injury. Where as in post test 8% had excellent knowledge, 68% had good knowledge, and remaining 24% had average knowledge Thus it shows that PTP was successful in improving the knowledge of staff nurses regarding prevention of needle stick injury.

N= 50

Knowledge area	Max. score	Pre test			Post test			Effectiveness
		Mean	S D	Mean %	Mean	S D	Mean %	
General information about needle stick injury	12	4.62	1.7	38.5	8.64	1.7	72	4.02±0
Causes of needle stick injury	4	0.6	0.86	15	3.6	0.48	90	3±0.38
Prevention of needle stick injury	14	3.82	1.5	27	9.22	1.98	65.85	5.4±0.48
Total	30	9.04	4.06	80.5	21.46	4.16	227.85	12.42±0.86

Table 1. Area wise mean, standard deviation, mean percentage of the knowledge score in pre-test and post-test.

Paired t test was calculated to find the effectiveness of planned teaching programme. The value of standard error was 0.37, mean difference was 9.38; the calculated t value was 20.42 which was more than the table value (2.009) at 5% level of significance.

Chi square test was conducted to find the association between socio demographic variables with level of knowledge of staff nurses regarding needle stick injury. There was no statistical significant association found between level of knowledge and any socio demographic variable.

Conclusion: Planned teaching programme is one of the most effective ways to improve the knowledge of staff nurses regarding needle stick injury. 74% of the nurses have experienced needle stick injury at least once in their carrier hence such programmes are of great importance for nurses.

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