Original Research Article

A Study to Assess the Effectiveness of Planned Teaching   Programme (PTP) on Knowledge Regarding Needle Stick, Sharp Injuries and Their Prevention among 1st Year B. Sc. Nursing Students at KINS, Karad

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ABSTRACT

A study was conducted to assess the effectiveness of planned teaching programme on knowledge regarding Needle stick, Sharp injuries and their prevention among 1st year B.BSC nursing students. One group pre test-post test design, with an evaluative approach was used for the study. 60 students   of 1st year BSc nursing were selected by purposive sampling technique. Structured knowledge questionnaire was used for data collection. The data on sample characteristics revealed that out of 60 students, majority 37(61.66%) belonged to the age group 18 yrs,42(70%) are female. 42(70%) students completed higher secondary education,60(100%) students are unmarried, 42(70%) resided in rural area and 18(30%) in urban area. Most of the students 36(60%) have know about needle stick and sharp injury. 27(45%) students got information from mass media (Television). The pre-test knowledge score was18.33% of the student had good, 63.33% showed average and 18.33% students showed poor knowledge. After the administration of PTP 28.33% student had well, 68.33% had average and 3.33% student had poor knowledge.

Key words: Needle Stick, Prevention, Nursing students.

INTRODUCTION

Occupational accidents are common in any area of work, including hospitals. Clients in all health care setting are at risk for acquiring infection because of exposure to number and types of diseases. Health care workers can protect themselves from contact with infectious material or exposure to communicable diseases by having knowledge of the infectious process and appropriate barrier protection. [1] one of the most potentially hazardous procedure that health care personnel face is using and disposing of needles and sharp instruments. Needle stick injuries present a major risk for infection with hepatitis B virus, hepatitis C virus and HIV. [2]

Needle stick injuries may be defined as the parenteral introduction of blood or other potentially infectious material by a hollow bore needle or sharp instrument, including but not limited to needles, lancets, scalpels and contaminated broken glass. Body fluids other than blood which also pose risk of infection include CSF, peritoneal fluid, pleural fluid, synovial fluid,

amniotic fluid, semen, vaginal discharge, saliva and unfixed tissues and organs. [3] Besides exposure to blood borne pathogens, the nurse is also at risk for about 20 other infections that can be transmitted through a needle stick, including tuberculosis, syphilis, and malaria. Needle stick injuries are the primary means of exposure to blood borne diseases for health care workers. The best prevention for health care providers is the scrupulous and consistent application of universal precautions for all clients as recommended by the centres for disease control and prevention. [4]

Sharps include syringe, needle, scalpels, broken glass and other objects contaminated with blood form a source of infection. The first reported case of needle stick transmitted HIV infection lead to increasing awareness and concern about the risk to health care workers posed by sharp injuries. Today it is clear that percutaneous injuries to health care workers from needle stick and other sharps carry significant risks of transmitting blood borne pathogens such as HBV, HCV and HIV. [5] Needle stick and sharp injuries (NSIs) can cause a significant risk to health care workers and are a threat to medical and nursing students. According to data from the World Health Organization (WHO), 35.7 million health care workers in the world are exposed to the risk of NSIs. Various literature data show that nurses experienced NSIs more frequently than other healthcare workers (HCWs). Depending on the country and hospital, the incident rate ranged from 27.4% to 66.2%.Medical and nursing students are an important group of health care providers. Medical students are at a particularly high risk for NSIs, because of their relative inexperience.

Objectives
1. To assess the knowledge regarding of needle stick, sharp injuries & their prevention

2. To evaluate the effectiveness of planned teaching programme on needle stick, sharp injuries & their prevention of gain in knowledge in post test.
3. To find out the assossiation between selected demographic variables with knowledge score

METHODOLOGY
An evaluator approach with one group pre-test, post-test design was used in the study. The intervention introduced was a planned teaching programme on NSIs and sharp injuries and its prevention. It can be shown as follows:

P_1 -------- X --------- P_2

P_1 - Pretest knowledge score before introducing the intervention
X - Intervention [Planned teaching programme]
P_2 – post-test knowledge score after 5 days of introducing the intervention

In this planned teaching programme, NSIs, sharp injuries and its prevention is the independent variable. Knowledge of students regarding NSIs and sharp injuries and its prevention is the dependent variable. The setting was of Krishna institute of nursing sciences, Karad. Total 60 students were selected by purposive sampling a type of non probability sampling technique. Students who are present at the time of data collection were included and who are not willing for this study were excluded. The structure questionnaire consist of two section, section 1- deals with the demographic data of the samples, section 2 deals with assessment of knowledge on needle stick injuries and prevention. The research investigator obtained ethical clearance and formal permission from the authorities of institution, Then with the permission of class coordinator, the tool was administrated to the students for pre-test on 24-4-2015 and post test on 30-4-2015 Time schedule was planned for collecting the data, in order to obtain free and frank response.

Each participant was taken into confidence assured above confidentiality of their responses. The average time taken for each data collection was approximately 20 minutes.

The data obtained was analyzed in terms of the objectives of the study using inferential statistics. The plan of data analysis was developed under the excellent direction of experts in the field of nursing and statistics. The plan of data in analysis was as follows.

1. Organization of data in a master sheet
2. Tabulation of data in terms of frequency, percentage, mean, standard deviation, median and range to describe the data

3. Classifying knowledge score using mean and standard deviation. Score of '1' was awarded to all correct answers while a score of '0' was awarded to all incorrect answers of structured questionnaire.
4. Inferential statistics were used to draw the following conclusions.
a) Paired't 'test is used for testing effectiveness of PTP and research hypotheses
b) Chi-square test to find the association between knowledge and demographic variables for testing for the research hypothesis

Table No. 1: Frequency and Percentage Distribution of Demographic Variables

Sr.No.	DEMOGRAPHICVARIABLES n=60	FREQUENCY(f)	PERCENTAGE (%)
1	**Age in years:**		
	a)17 yrs	1	1.66%
	b)18 yrs	37	61.66%
	c)19 yrs	20	33.33%
	d)Above 19 yrs	2	3.33%
2	**Sex:**		
	a)male	18	30%
	b)female	42	70%
3	**Education:**		
	a)primary	0	0%
	b)secondary	0	0%
	c)higher secondary	60	100%
	d)graduate	0	0%
	e)post graduate	0	0%
4	**Marital status:**		
	a)Married	0	0%
	b)Unmarried	60	100%
	c)widow/divorce	0	0%
5	**Residence:**		
	a)Urban	18	30%
	b)Rural	42	70%
6.	**Awareness about needle stick and sharp injuries?**		
	a)yes	36	60%
	b)no	24	40%
7	**If yes-Information through any mass media.**		
	a)Radio	2	3.33%
	b)T V	27	45%
	c)Newspaper	5	8.33%
	d)Magazines	2	3.33%
8	**Most commonly seen needle stick and sharp injuries?**		
	a)yes	16	26.66%
	b)no	44	73.33%

The data on sample characteristics revealed that out of 60 students, majority 37(61.66%) belonged to the age group 18 yrs, 42(70%) are female. 42(70%) students completed higher secondary education, 60(100%) students are unmarried, 42(70%) resided in rural area and 18(30%) in urban area. Most of the students 36(60%) have

know about needle stick and sharp injury. 27(45%) students got information from mass media (Television).
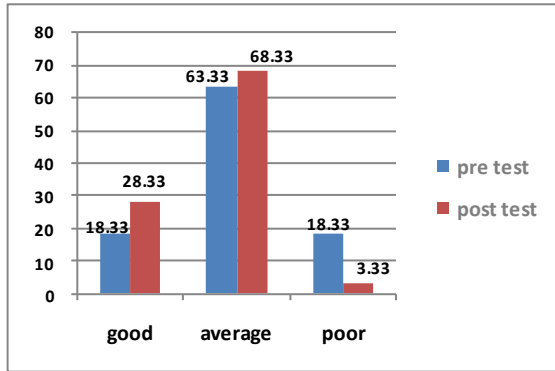

Fig: Distribution of Frequency & Percentage of Knowledge Score in Pre-Test & Post-Test

Bar diagram shows that distribution of frequency & percentage of knowledge score in pre-test & post-test. In the pre-test 38(63.33%) students got average score,11(18.33%)got good, and 11(18.33%) got poor score, after post-test 41(68.33%) students got average score, 17(28.33%) got good score, 2(03.33%) got poor score.

TABLE 2: overall mean, standard deviation regarding kn0wledge in pre test & post test

	PRE-TEST	POST-TEST
MEAN	13.067	18.433
STANDARD DEVIATION	2.711	7.659

In the pre-test the mean value was 13.067 and in post-test 18.433. Standard deviation in pre-test was 2.711 and in post-test 7.659.

TABLE 3: Association between Pre-Test Knowledge Scores and Demographic Variables:

Sr. no	demographic variable	Level of knowledge			Chi-Square	DF	'p'value
		Good	Average	Poor			
1	**Age:** a)17 yrs b)18 yrs c)19 yrs d)Above 19 yrs	0 5 6 0	2 26 10 0	0 5 4 2	13.368	6	0.0375
2	**Sex:** a)Male b)Female	1 10	12 26	5 6	3.586	2	0.1664
3	**Geographical area** a)Urban b)Rural	4 7	11 27	3 8	0.2711	2	0.8732
4	**Knowledge About Nsi's & Sharp Injury** a)Yes b)No	4 7	24 14	8 3	3.461	2	0.1772
5	**Use Of Mass Media** a)Radio b)T V c)Newspaper d)Magazine	0 4 0 1	2 18 4 0	0 5 1 1	6.029	6	0.4200

The study reveals that age group ('p' value-0.0375) shows significant association with P value (<0.0001)

DISCUSSION

In our study in the pre-test 38(63.33%) students got average score,11(18.33%)got good, and 11(18.33%) got poor score, after post-test 41(68.33%) students got average score, 17(28.33%) got good score, 2(03.33%) got poor score. There are other studies which can be compare are, Study By Sharma s et al shows in their study at tertiary care cardiac hospital on

Knowledge, attitude and practices on needle-stick and sharps injuries shows that 91.5% knew about the procedure for reporting of NSSIs. Only 50.2% HCWs gave correct answers regarding disease transmission through needle stick and sharp injury. [6] Another study on Needle stick injuries in nurses at a tertiary health care facility by Manjoor L also shows that Out of 77 nurses who participated in our study,

only 33 (42%) nurses were aware of the occupational hazards of their profession when they joined nursing. [7] Rajiv saini stated in their research on Knowledge and awareness of needlestick injury among students of Rural Dental College, Maharashtra, India, A total of 150 students participated. The male to female ratio was 1:2; mean age of respondents was 20.66±1.01 years. On an average, 89.23% and 10.67% of the students had correct and incorrect knowledge about needlestick injury, respectively. A total of 91.55% exhibited adequate level of awareness, while 08.45% exhibited incorrect level of awareness about management of needlestick injury. [8] As Per as Effectiveness of PTP is concerned A Study conducted by co author of this article, Prabhuswami et al also shown that PTP is an effective method for improving the knowledge score. [9]

CONCLUSION

The finding of the study reveals that a PTP can make a significant rise in knowledge level of students which was obtained from the post-test scores. It is very effective to the student and they can use this knowledge in working are. The result of the study shows that there is need to arrange informative programmes on NSI'S, sharp injury and their prevention.

IMPLICATIONS

The findings of the study have varied implications in different areas of nursing practice, nursing administration, nursing education, nursing research.

1. **Nursing practice:** This study is conducted among nursing students to assess the level of knowledge regarding NSI's, sharp injury and their prevention. This study can be utilized by practicing students to educate and help others and thus make them aware about NSI's, sharp injury and their prevention.

2. **Nursing Education:** Nursing educator has a humble opportunity to educate community regarding NSI's, sharp injury and their prevention, and also can be used to educate in diploma, graduate, post graduate, nursing levels. Since the present study has proved that PTP can make significant change in knowledge level of students. So there is need to educate regarding NSI's, sharp injury and their prevention.

3. **Nursing Administration:** The nurse administrator takes an initiative in arranging programmes like seminar, workshop, and health education programs etc. regarding NSI's, sharp injury and their prevention.

4. **Nursing Research:** There is growing need for furnishing nursing research in all the areas of health care. The nurse researcher especially beginners need to enhance their quest for knowledge. The nurse researcher may effectively use the result of available studies and recommended on the importance of NSI's, sharp injury and their prevention.

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