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EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON KNOWLEDGE REGARDING MANAGEMENT OF NEEDLE STICK INJURY AMONG B.Sc (N) 1st YEAR STUDENTS IN A NURSING COLLEGE IN BHOPAL (M P)

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ABSTRACT

Needle stick injury is defined as an accidental skin penetration stab wound from needle or by a sharp. Needle stick injury is partial introduction of foreign bodies into the body of a health care worker during the performance of his or her duties of blood or other potentially infective material. In the present study, evaluative approach with pre-experimental research design is used to accomplish the objectives. Forty (40) B.Sc (N) 1st year students were selected through purposive sampling technique after obtaining their written consent. The data was collected with the help of Demographic Proforma and Structured questionnaire. The obtained data was analysed by using descriptive and inferential statistics. The result shows that mean post-test knowledge score was higher than the mean pre-test knowledge score. The calculated 't' value was greater than the table value, which shows the significant difference between the pre-test and post-test knowledge score.

Key word: Effectiveness, Knowledge, Management, Needle stick injury.

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INTRODUCTION

Globally, needle stick injuries are the most common source of occupational exposure to blood and primary cause of blood borne infection of health care workers.

According to WHO 2002 report, out of 35million health care workers 2 million experience percutaneous exposure to infectious diseases each year. It further notes that 37.6% of hepatitis C, 4.4% HIV/ AIDS among health care workers around the world are due to needle stick injuries.

STATEMENT OF PROBLEM

Assess the Effectiveness of STP on Knowledge Regarding Management of Needle Stick Injury Among B.Sc (N) 1st Year Student In a Selected College in Bhopal (M.P.)

OBJECTIVES OF THE STUDY

1. To assess the pre-test knowledge score regarding management of needle stick injury among B.Sc (N) 1st year students

2. To assess the post-test knowledge score regarding management of needle stick injury among B.Sc (N) 1st year students.

3. To construct/ develop the STP on management of needle stick injury for B.Sc (N) 1st year students.

4. To find out the association between pre-test knowledge score of B.Sc (N) 1st year students and selected socio-demographic variables.

HYPOTHESIS

H1: The post-test knowledge score of B.Sc (N) 1st year students will be significantly more than their pre-test knowledge score.

H2 There will be significant association of the knowledge of the B.Sc (Nursing) 1st year students regarding management of needle stick injury with their selected demographic variables such as age, sex, religion etc.

OPERATIONAL DEFINITION

Assess - It is the organised systemic continuous process of collecting data on pre-test and post-test knowledge regarding Needle stick injury

Knowledge - In this study, it refers to the correct responses by the B.Sc. (N) 1st year students regarding management of needle stick injury elicited through a self-administered questionnaire.

Structured teaching programme - For this study a structured teaching programme (STP) was prepared to improve the knowledge regarding management of needle stick injury.

Management of needle stick injury —

Bleed it: Encourage bleeding under running water.

Wash it: Flush mucous membranes or skin with copious amount of running water.

Report it: To CMO and the Infection Control Nurse.

Get First Aid: Help infection control nurse in completing the format for reporting needle stick injury

REVIEW OF LITERATURE

Schmid, Schwager and Drexler (2007), reported that one half of all medical students and nursing students have had experience of an exposure to blood or body fluids during the final two years of study. One study reported that only five out of twelve nursing students exposed to biologically hazardous material, reported the incident. This study also found that students exposed to biological hazards experience fear of contracting potential infections such as HIV/ AIDS hepatitis B and C.

Ruhi Varghese, et., al, (2015), study was carried out to know the effect of health education on the knowledge and practice relating to personal hygiene of primary school children with one group pre-test & post-test research design

with qualitative approach which was adopted to select 40 samples from selected primary school of Waghodia Taluka in district Vododara, Gujarat. A Self-administered structured questionnaire was used to collect the data which was analysed by descriptive and inferential statistics. The level significance of the study was fixed at 0.05 level.

METHODOLOGY

In the present study Pre-experimental approach was used to evaluate the effectiveness of STP. The study was conducted among 40 B.Sc (N) 1st year students selected from L.N. Nursing college of Bhopal. Purposive sampling technique was found appropriate and the tool was prepared on the basis of review of literature. Validity and reliability of the tool and STP were tested. The collected data were analysed using descriptive and inferential statistics and was presented in the form of tables, graphs and diagrams.

RESULT AND FINDINGS

Table - 1.1: Description of Socio-demographic variable

Sl. No.	Socio-demographic variables		Frequency (f)	Percentage (%)
1.	Age (in years)	18	24	60.0
		19	12	30.0
		20	3	7.5
		21	1	2.5
		22	0	0
2.	Gender	Male	3	7.5
		Female	37	92.5
3.	Marital Status	Single	39	97.5
		Married	1	2.5
4.	Education	12th Standard	38	95.0
		Diploma	1	2.5
		Degree	1	2.5
5.	Religion	Hindu	37	92.5
		Muslim	2	5.0
		Christian	1	2.5
		Other	0	0
6.	Family	Nuclear	20	50.0
		Joint	19	47.5
		Extended	1	2.5
7.	Knowledge	Yes	33	82.5
		No	7	17.5

Table – 1.1 shows 60% of samples were aged 18 years, 30% were of 19 years, 7.5% were of 20 years and 2.5% were aged 21 years. 92.5% were girls and 7.5% boys. Most of the B.Sc (N) 1st year students, 97.5% were single, almost 95% were 12th passed and 92.5% were Hindus, 5% were Muslims. 50% were from nuclear families and 47.5% from joint families. Finally, 82.5% of B.Sc (N) 1st year students were found having knowledge regarding Needle Stick Injury.

Table - 1.2: Distribution of B.Sc (N) 1st year students based on pre- and post-test knowledge score

Level of Knowledge	Range of score	Pre-test		Post-test	
		Frequency	Percentage (%)	Frequency	Percentage (%)
Poor	0-5	7	17.5	1	2.5
Average	6-10	25	62.5	15	37.5
Good	11-16	8	8.0	24	60.0
TOTAL		**40**	Mean Score: **8.37**	40	Mean Score: **10.77**

Table - 1.3: Overall effectiveness of STP with Mean, Mean difference, Standard Deviation and 't' value of Pre-test and Post-test knowledge scores.

N=40

Group	Mean knowledge Score		Mean difference	Standard Deviation		t value
	Pre-test	Post-test		Pre-test	Post-test	
B.Sc (N) 1st year students	8.37	10.77	2.4	2.43	2.89	6.66

This data shows that the mean post-test knowledge score (10.77) was higher than the mean pre-test knowledge score (8.37). The computed 't' value (t 39 = 6.66) was higher than the table value (t 39 = 2.46.). Hence, the research hypothesis was accepted and it was inferred that the mean difference between pre- and post-test knowledge scores was a true difference and not a chance difference. This indicates that the structured teaching programme was effective in increasing the knowledge level among B.Sc. (N) 1st year students.

Table - 1.4: Association between Pre-test Knowledge Score and Selected Demographic variables

Demographic variables	Categories	Total knowledge score		CHI square value	Degree of freedom	Table value	Inferential
		Mean ≤ 8.37	Mean ≥ 8.37				
Age	18 years	13	11	6.40	3	7.82	NS
	19 year	3	9				
	20 year	0	3				
	21 year	1	0				
	22 year	0	0				
Sex	Male	1	2	1.05	1	3.14	NS
	Female	15	22				
Marital status	Single	16	24	0	1	3.84	NS
	Married	0	0				
	widow	0	0				
Education	12th	15	24	1.23	2	5.99	NS
	Diploma	0	0				
	Degree	0	1				
Religion	Hindu	14	23	1.64	3	7.82	NS
	Muslim	1	1				
	Christian	1	0				
	Others	0	0				
Family	Joint	3	15	7.97	1	5.99	S
	Nuclear	12	9				
	Extend	1	0				
Knowledge	Yes	11	21	2.10	1	3.84	NS
	No	5	3				

The data in **Table - 1.4** shows that there is significant association between the pre-test knowledge score of B.Sc (N) 1st year students on management of needle stick injury and selected demographic variables at 0.05 level of significance.

DISCUSSION

In the pre-test it showed 40% of the respondents had good knowledge, 62.5% had average knowledge and 17.5% had poor knowledge about management of needle stick injury, whereas in the post-test 60% of the respondents had shown good knowledge, 37.5% of the respondents were found with average knowledge, and 2.5% of respondents showed poor knowledge. The mean percentage of post-test knowledge score, (10.77%) of B.sc (N) 1st year students was higher compared to mean percentage of pre-test knowledge score (8.37%).

Nursing education

In-service education is to be provided to the nursing personnel at various levels to make them aware on management of needle stick injury, which will help to improve knowledge regarding management of needle stick injury.

Nursing administration

The administrator should facilitate the implementation of various programmes in community and also document the activities for better implementation. The nursing administrators should implement the outreach programmes to make the public aware about management of needle stick injury.

Nursing practice

B.Sc. (N) 1st year students' knowledge deficit indicates the need for organising health education session to them regarding management of needle tick injury and its prevention by the nurses both in hospital and at college level.

Nursing research

There is a need for extensive and intensive research on this topic, so as to develop new strategies for B.Sc. (N) 1st year students regarding management of needle stick injury.

SUGGESTIONS

- A health education programme regarding management of needle stick injury could be arranged by health professionals in Hospitals.

- The topic should be well publicised among health workers in the Hospitals.

- The teaching handouts like on STP can be prepared for the educational purpose and can be distributed among the B.Sc. (N) 1st year students.

- Special programmes could be arranged for nursing students regarding management of needle stick injury.

RECOMMENDATIONS

The following recommendations have been made for further study on the basis of the study findings —

- A similar study can be undertaken with a large sample to generalise the findings.

- Regular studies can be done to assess the knowledge, among B.Sc. (N) 1st year students regarding management of needle stick injury.

- A comparative study can be done on multiple groups to find out the knowledge regarding management of needle stick injury.

- A similar study can be undertaken among B.Sc. (N) 1st year students in LNNC.

- A similar study can be replicated on a sample with different demographic variables.

REFERENCES

1. Cook CE, Stephens JM. Clinical, economic, and humanistic burden of needle stick injury in health workers. Med device (acukl). 2017,10:225-235 [PMC free article] {Pub Med}

2. American college of surgeons (ACS) committee on Preoperative care. Revised statement on sharps safety. Bull Am coll surg.2016 Oct; 101(10):53- 57[Pub Med]

3. Creswell, john W. (2013) Research design and review of literature .qualitative and quantitative measure of and mixed method approaches (4th ed.) 234-237.

4. Baglione, L.(2012). Writing a research paper in political science of needle stick injury. 786-78