

**“EFFECTIVENESS OF VIDEO ASSISTED TEACHING PROGRAM ON KNOWLEDGE AND PRACTICE REGARDING PREVENTION OF NEEDLE STICK INJURIES AMONG FOURTH YEAR B.SC NURSING STUDENTS AT RAMA COLLEGE OF NURSING, RAMA UNIVERSITY, KANPUR, UTTAR PRADESH.”**

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**ABSTRACT:**

**Background:** Needle stick injuries are most often associated with sudden patient movement during the injection Recapping needles. The main objective of the study is to assess the effectiveness of video assisted teaching program regarding prevention of needle sticks injuries among fourth year B.Sc. nursing students. **Materials and method:** A pre-experimental, one group pre and post-test research design was adopted to find the effectiveness of video assisted teaching program on knowledge and practice regarding prevention of needle sticks injuries among fourth year B.Sc. nursing students at Rama College of nursing, Rama university, Kanpur, Uttar Pradesh. A total of 100fourth year students were selected by using probability simple random sampling technique.**Results:** Majority 98 (98%) were in the age group of 21-22 years, 78 (78%) were females, 58 (58%) were getting information from hospital. In pre-test 63% were in poor knowledge and 81% were in gained excellent knowledge after video assisted teaching program. Where in pre-test 48% were in poor preventive practice and 88% were gained excellent preventive practice knowledge. The knowledge post-test mean score  $23 \pm 3.1$ , which is higher than pre-test mean score  $12.8 \pm 3.2$ , the calculated paired 't' value is 17.5. The calculated chi square value shown significant relation between knowledge scores with source of information ( $\chi^2=9.8$ ). **Conclusion:** The study concluded that the level of knowledge and practice were improved after the video assisted teaching. Thus, video assisted teaching program is an effective strategy which can help in improving the level of knowledge and practice among B.Sc nursing fourth year students.

**Key words:** Needle stick injuries, video assisted teaching program, knowledge and practice, B.Sc nursing students.

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**INTRODUCTION:**

Needles stick injuries are wounds caused by sharps like hypodermic needles, blood collection needles, intravenous cannula or needles used to connect parts of an intravenous delivery system. Among the greatest risks faced by frontline health care workers. Every Percutaneous needle stick injury carries a risk of infection from blood born pathogen.

Needle stick injuries (NSI) most frequently occur during when they were drawing blood and intramuscular or intravenous drugs or performing other procedures involving sharps where

the needle can deviate and injure the nursing staff during their duties. For sharp injuries sutures and use of sharp tools are most common equipment's that causes injuries.

The rate of needle stick injury in Taiwan, India, East Ethiopia and Malaysia is 56%, 91.85%, 62.8% and 71% respectively. The result of a preliminary study conducted on 10th January 2018 shows that 10 out of 12 academic students and clinical students at FIK UI have experienced an needle stick injuries (NSI) during their clinical practicum period at the hospital

Nursing students were at high risk for the needle stick and sharps injuries among health care workers. Females, younger students, night shift frequency, lack of occupational safety training and lack of personal protective equipment use was significant risk factors for the needle stick and sharps injuries among nursing students. The risk of infection due to occupational exposure ranges from as high as 40% for hepatitis B virus (HBV) and 3% to 10% for hepatitis C virus (HCV), to as low as 0.2% to 0.5% for human immunodeficiency virus (HIV).

In a developing country like India, the factors which are responsible for needle stick injuries due to unnecessary injections, lack of vaccination among health care personnel, poor quality of devices and finally limited knowledge of safety precautions taking care of the above factors may reduce role the exposure to needle stick injury. Clinical trials have shown that preventive measures are highly effective in reducing the incidence of needle stick injuries. Thus, it is essential to create awareness about needle stick injuries among nursing students regarding the risks involved after exposure to such injuries.

#### **OBJECTIVES OF THE STUDY:**

1. To assess the existing knowledge and practice regarding prevention of Needle stick injuries among Fourth year B.sc nursing students.
2. To determine the effectiveness of video assisted teaching regarding prevention of Needle sticks injuries among Fourth year B.sc nursing students.
3. To find out the correlation between post-test knowledge and practice scores regarding prevention of Needle stick injuries among Fourth year B.sc nursing students.
4. To find out the association between pre-test knowledge and practice scores with their selected variables.

#### **HYPOTHESIS:**

**H1-** There will be a significant difference between the pretest and post-test knowledge and practice scores regarding prevention of needle stick injuries among Fourth year B.sc nursing students.

**H2-** There will be correlation between the post- test knowledge and practice regarding prevention of needle stick injuries among Fourth year B.sc nursing students.

**H3-** There will be a significant association between the pre- test knowledge and practices scores with selected their selected demographic variables regarding prevention of needle stick injuries among Fourth year B.sc nursing students.

#### **MATERIALS AND METHODS:**

The researcher has adopted a quantitative pre-experimental, one group pre and post -test design was adopted in this study. The study was conducted in Rama college of nursing, Rama university, Kanpur, Utter Pradesh. Hundred B.Sc Nursing students were selected by using convenient sampling technique. The research tool consists of two sections. Section-I consist of socio demographic variables, section-II consists of 2 parts, Part-A consist of 30 multiple choice questions regarding knowledge, Part- B consist of check list with 20 points. Part-A total score of 30, part-B total score 20. The reliability quotient was obtained for the knowledge tool was  $r=0.91$ , for the practice checklist  $r=0.95$ .

## RESULTS:

The collected data were analysed by using **descriptive** and **inferential** statistics.

**Table No:1 Frequency and percentage distribution of Fourth year B.sc nursing students according to their socio demographic variables. n=100.**

| S. no | Demographic variables | f  | %   |
|-------|-----------------------|----|-----|
| 1     | Age                   |    |     |
|       | a) 18-20              | 0  | 0   |
|       | b) 21-22              | 98 | 98% |
|       | c) 23-25              | 2  | 2%  |
|       | d) Above 25 years     | 0  | 0   |
| 2     | Gender                |    |     |
|       | a) Male               | 22 | 22% |
|       | b) Female             | 78 | 78% |
| 3     | Source of information |    |     |
|       | a) Media              | 32 | 32% |
|       | b) Hospital           | 58 | 58% |
|       | c) News paper         | 2  | 2%  |
|       | d) TV/ Radio          | 8  | 8%  |

Table No 1 describes the socio demographic data of B.Sc nursing fourth year students. In that, Majority 98 (98%) were in the age group of 21-22 years, 78 (78%) were females, 58 (58%) were getting information from hospital.

**Table No 2 Comparison between pre and post-test level of knowledge scores regarding prevention of needle stick injuries among fourth year B.Sc nursing students.N=100**

| Variable  | Level of knowledge   | Score | Pre- test |     | Post-test |     |
|-----------|----------------------|-------|-----------|-----|-----------|-----|
|           |                      |       | f         | %   | f         | %   |
| Knowledge | Poor ( $\leq 50\%$ ) | 0-15  | 63        | 63% | 6         | 6%  |
|           | Good (51-75%)        | 16-22 | 29        | 29% | 13        | 13% |
|           | Excellent            | 23-30 | 8         | 8%  | 81        | 81% |

|  |        |  |  |  |  |  |
|--|--------|--|--|--|--|--|
|  | (≥76%) |  |  |  |  |  |
|--|--------|--|--|--|--|--|

Table No 2 describes comparison between pre and post-test level of knowledge in that in pre-test majority 63% were in poor knowledge, where in post-test majority 81% gained excellent knowledge. Hence, H1 that is, There will be a significant difference between the pretest and post-test knowledge and practice scores regarding prevention of needle stick injuries among Fourth year B.sc nursing students has accepted.

**Table No 3 Comparison between pre and post-test level of practice scores regarding prevention of needle stick injuries among fourth year B.Sc nursing students.N=100**

| Variable | Level of Practice | Score | Pre- test |     | Post-test |     |
|----------|-------------------|-------|-----------|-----|-----------|-----|
|          |                   |       | f         | %   | f         | %   |
| Practice | Poor (≤50%)       | 0-10  | 47        | 47% | 1         | 1%  |
|          | Good (51-75%)     | 11-25 | 51        | 51% | 11        | 11% |
|          | Excellent (≥76%)  | 16-20 | 2         | 2%  | 88        | 88% |

The data presented in the table No 3 shows comparison between pre and post-test practice scores. In pre-test majority 51% were having good practices, where in post-test majority 88% were gained excellent level of practices. Hence, **H1**-There will be a significant difference between the pretest and post-test knowledge and practice scores regarding prevention of needle stick injuries among Fourth year B.sc nursing students has accepted.

**Table No 4 Mean,standard deviation and paired ‘t’ test knowledge scores regarding prevention of needle stick injuries among fourth year B.Sc nursing students. N=100**

| Variable  | Test      | Maximum score | Range of score | Mean | SD  | Paired ‘t’ test | Table Value |
|-----------|-----------|---------------|----------------|------|-----|-----------------|-------------|
| Knowledge | Pre-test  | 30            | 9-22           | 12.8 | 3.2 | 17.2*<br>S*     | 2.66        |
|           | Post-test |               | 15-30          | 23   | 3.1 |                 |             |

**Table No 5 Mean, standard deviation and paired ‘t’ test practice scores regarding prevention of needle stick injuries among fourth year B.Sc nursing students. N=100**

| Variable | Test      | Maximum score | Range of score | Mean | SD  | Paired ‘t’ test | Table Value |
|----------|-----------|---------------|----------------|------|-----|-----------------|-------------|
| Practice | Pre-test  | 20            | 5-16           | 10.8 | 1.7 | 15.4*<br>S*     | 2.66        |
|          | Post-test |               | 9-20           | 19.2 | 2.1 |                 |             |

**Table No 6 Correlation between post-test level of knowledge and practice scores regarding prevention of needle stick injuries among fourth year B.Sc nursing students. N=100**

| S. No | Research variable | Mean | SD  | Correlation             | Inference                     |
|-------|-------------------|------|-----|-------------------------|-------------------------------|
| 1     | Knowledge         | 23   | 3.1 | r=0.64<br>p- value=0.25 | Moderate positive correlation |
| 2     | Practice          | 19.2 | 2.1 |                         |                               |

The calculated chi square value shown significant relation between pre-test knowledge scores with source of information( $\chi^2=9.8$ ). there is a significant relation between post-test practice scores with gender ( $\chi^2=6.2$ ). Hence, **H3**-There will be a significant association between the pre- test knowledge and practices scores with selected their selected demographic variables regarding prevention of needle stick injuries among Fourth year B.sc nursing students.

#### RECOMMENDATION:

- ✓ A similar study can be done on a large sample to generalize the findings.
- ✓ A similar study can be carried out to evaluate the effectiveness of various teaching strategies like self-instructional module, information booklet, computer-assisted instruction, on knowledge regarding prevention of needle stick injuries.
- ✓ A descriptive study can be done to assess the knowledge of Fourth year B.sc nursing students regarding prevention of needle stick injuries.

#### CONCLUSION:

The researcher concludes the study by showing the effectiveness of the video assisted teaching on knowledge and practice regarding prevention of needle sticks injuries among Fourth year B.sc nursing students at Rama college of nursing, Rama university, Kanpur, Utter Pradesh.

#### REFERENCES:

1. Dechasa Adare Mengistu, Sina Temesgen Tolera prevalence of occupational exposure to needle- stick injury and associated factors among healthcare workers of developing countries: Systemic review, J.Occup Health .2020;62:e 1219
2. Solomon Assen, Mamo Wubshet magnitude and associated factors f needle stick and sharp injuries among health care workers in dessie city hospitals, north east Ethiopia, Assen et.al BMC Nursing (2020)19:31.
3. .Fethin George, effectiveness of structured teaching programme on knowledge regarding prevention and management of needle stick injury among selected student nurses , Asian J nursing education and research 2020; vol-10(1):76-78
4. Shilpi Yadav, Varsha Vyas, Shruti Hazari, RP Gehdoo, Surekha Patil Awareness of safety protocols for prevention of needle stick injuries in anesthesiologists from Maharashtra: A survey study. Indian j Anaesth 2020; vol-64:306-9
5. Annamaria Bagnasco, Milko Zanini, Gianluca Catania (2020) study on Predicting needle stick and sharps injuries in nursing students: Development of the SNNIP scale. Nursing Open. 2020.