A STUDY TO ASSESS THE SELF INSTRUCTIONAL MODULE PREVENTION OF NEEDLE STICK INJURY AMONG NURSING PERSONNEL IN SRI RAMAKRISHNA HOSPITAL, COIMBATORE

P.PRAKASH¹, S. SUVITHA² & R. KRISHNAVENI³

¹Nursing Lecturer in College of Nursing, Pondicherry Institute of Medical sciences, Puducherry, India
²Nursing Lecturer, MTPG & RIHS, College of Nursing, Puducherry, India
³M.Sc. Nursing, Madras Medical college, Chennai, Tamil Nadu, India

ABSTRACT:

A Quasi experimental study was conducted to assess the effectiveness Of Self Instructional Module on Prevention of Needle Stick Injuries Among Nursing Personnel between the age group of 21 to 35 years. A convenient samples of 50 staff nurses selected randomly from Sri Ramakrishna Hospital, Coimbatore were recruited for the study. 20 Questions were administered and time provided to answer was around 30 minutes. The mean value of pretest was 18.18 and post test was 26.94 with the mean difference was 17.02 .The ‘t’ value computed as 18.32 which reveals that statistically significant. Hence, the Nurses has improvement in the level of knowledge after the Self Instructional module.

KEYWORDS: Needle stick injury, Nursing, self instructional module

INTRODUCTION

Health care workers are an occupational group who carry huge responsibility of looking after the health of the nation in the process of executing the duties, health works become exposed to various hazards that are specific to job and environment.

Nurse Nancy Prudent had just finished hour eleven of an eight-hour shift. The sun was cresting in the east, painting the ICU wall with a golden hue. Dr. Olsen asked Nancy to draw some blood from a patient for a complete blood count. The patient was a newly admitted young male. As Nancy wrapped a tourniquet just above his right elbow, she wondered what had diagnosis been. She was angry that she was awake and her patient was sleeping. She quietly talked to him, telling him what she was going to do, as she inserted a needle in the vein that was nicely protruding from his forearm. As she was retracting the needle, her patient jerked in a violent way thrusting part of the needle into Nancy’s finger? Nancy stared in horror at the needle hanging limply from her finger. Later, she learned the patient had AIDS. Likewise incident are happening worldwide we are in stage to be aware safe guard ourselves.

Health care workers (HCWs) are exposed to blood borne pathogens, especially hepatitis B (HBV) hepatitis C (HCV), human immune deficiency virus (HIV) through job-related risk factors like needle stick, stab, scratch, cut, or other bloody injuries. Needle stick injuries can be prevented by safer devices. There is substantial discrepancy between much of the epidemiological evidence and the belief that nearly all of the HIV burden in
South Asia can be accounted by heterosexual transmission and the sexual behavior of Africans. For this a number of observations raise the question of an alternative route of transmission, for which medical care and the use of injections are prime candidate.

Healthcare workers face the risk of infection from potentially deadly diseases from the use of unsafe needle search and every day; risks that are totally unnecessary. It has been estimated that over 600,000 needle sticks occur annually leading to 1,000 infections and over 100 deaths.

Healthcare workers and students on training who are directly involved in treating and nursing patients face a great risk of acquiring blood-borne infections from the workplace. Needle prick injuries (NPI) are the commonest route by which such infections are transmitted from patients to healthcare providers. Nursing students on training are no exception, as they get exposed to accidental needle pricks and contamination during their hospital activities. Lack of appropriate resources, knowledge and skills, coupled with the unavailability of the universal standard precautionary procedures and compliance thereof, constitute high risks for needle prick injuries. Adequate knowledge and adherence to safety practices could prevent the occurrence of NPI and the related consequences. A survey was conducted among nursing students at a specific university in Gauteng to assess their knowledge of NPI, to identify and describe factors that contribute to the occurrence of NPI, and to discover the circumstances of needle prick accidents among the targeted group of students.

**Need for the Study**

Exposure to blood borne pathogens is a serious occupational safety issue. Although the risk of transmission of infectious disease is statistically small, it can have devastating effects. Mandatory compliance with standard and transmission based precautions is designed to prevent the transmission of infectious disease, regardless of the patient’s known or suspected diagnosis. Nurses have the highest rate of documented needle stick injuries, yet do not always comply with mandated guidelines.

According to CDC Survey data, fifty percent of injuries occur between the time the procedure is completed and disposal of the device. Twenty percent are associated with disposal of the device. Other injuries occur when the needle pierces the syringe cap during recapping, when a body fluid is transferred from syringe to a specimen container, and when used needles are not disposed of in puncture-resistant containers. Devices requiring disassembly are associated with higher rates of injury.

The pathogens that pose the most serious health risks are 1. Hepatitis B virus (HBV) 2. Hepatitis C virus (HCV) 3. Human Immuno deficiency virus (HIV), (AIDS) HBV vaccination is recommended for all health care workers and OSHA mandates that all employers offer the vaccine to at risk employees. The HBV vaccine has proven to be effective in preventing infection in workers exposed to HBV. No vaccine exists to prevent HCV or HIV infection.

In 2000, the federal Needle stick Safety and Prevention Act were enacted to address an epidemic of needle stick injuries. The law has made many workplaces safer, yet we know that too many health care professionals are still in danger.

Every year, health care workers experience between 600,000 and 800,000 exposures to blood (United States Department of Labor-Occupational Safety and Health Administration [USDOL-OSHA], 2001). Registered nurses working at the bedside sustain an overwhelming majority of these injuries (Perry, Parker, & Jagger, 2003).
These exposures carry the risk of infection with Hepatitis B (HBV), Hepatitis C (HCV), and Human Immunodeficiency Virus (HIV), the virus that cause AIDS. Each of these viruses poses a different risk if a health care worker is exposed. More than 20 other infections can be transmitted through needle sticks, including syphilis, malaria, and herpes (Centers for Disease Control and Prevention [CDC, 1998a]. Atleast 1,000 health care workers are estimated to contract serious infections annually from needle stick and sharps injuries (International Health Care Worker Safety Center, 1999). According to the National Institute of Occupational Safety and Health (NIOSH), the design of the device can increase the risk of injury. Specific features make certain devices more dangerous. These include: (National Institute for Occupational Safety and Health [NIOSH], 1999)

All health care workers are required to attain up-to-date knowledge about the infectious consequences of NSI and the preventive actions to be taken after incurring NSI. Hepatitis B is the most common infection transmitted through sharps injury followed by Hepatitis C. Although most of our subjects were aware that potentially life-threatening illness can be transmitted through NSI, a substantial number graded HIV infection as the single most common threat after an NSI.

Being a health care professional, we all are the backbone of this profession it is necessary to safeguard our self first. The above aspects reveal that there are some serious health problems faced by the nurses due to needle stick injury. This can be easily tackled by education. The problems and complications can be prevented by giving education. Self instructional module on prevention of needle stick injury will make a difference. Therefore the researcher have chosen this problem, as a research topic.

Statement of the Problem

A Study to Assess The Effectiveness Of Self Instructional Module On Prevention Of Needle Stick Injuries Among Nursing Personnel In Sri Ramakrishna Hospital At Coimbatore.

Objective of the Study

- Assessment of knowledge on prevention of needle stick injury
- Education to the nursing personnel through self instructional module on prevention of needle stick injury
- Reassessment of knowledge on prevention of needle stick injury after education through self instructional module

Operational Definition

Effectiveness: Level of response.

Self Instructional: Learning without structured teaching and self learning.

Module: A study material.

Needle Stick Injury: Needle-stick injuries are wounds caused by needles or other sharp objects.

CONCEPTUAL FRAME WORK

Modified General System Model

A system model is one which explains that a good system must have three components that is Input, Throughput and Output. The input is available information used to start the job. The process that takes place is represented at the stage of throughput and the results obtained as the output.
It refers to assessment of knowledge of nursing personnel on prevention of needle stick injury.

Through Put

It refers to education to the nursing personnel through self instructional module on prevention of needle stick injury.

Output

It refers to the reassessment of knowledge of nursing personnel on prevention of needle stick injury after education through self instructional module.

Feedback

It is the environment response of the system feedback may be neutral, positive or negative. If the feedback is negative the process is again reassessed with modified tool.

Projected Outcome

This study will help to gain adequate knowledge on prevention of needle stick injuries through self instructional module to nursing personnel.

REVIEW OF LITERATURE

The review of literature is defined as a broad, comprehensive, systematic & the critical review of scholarly publication, unpublished materials and personal communication. It helps the researcher to develop insight to solve the problems stated. The present chapter discusses the review of literature pertinent to the study. The literature review is discussed under the following heading.

Literature Related to Needle Stick Injury

A cross-sectional descriptive study was conducted to assess the frequency and factors associated with NSIs in nurses. It also focuses on safety measures adopted by these nurses after a needle stick injury 80 nurses have participated in the study out of 77 with a response rate of 99%. These responses were obtained via a pretested self-administered questionnaire the results shows that Needle stick injury is the most important occupational health hazard in nurses with alarmingly high rates. Reporting to the concerned authorities, screening of nurses after needle stick injury and promotion of safety measures against it should be greatly encouraged. (Iram Manzoor, Seema Daud 2010).

A study was conducted the prevalence and correlates of needle-stick injury in the health personnel of the Paediatric Department. Cross-sectional questionnaire survey. Physicians undergoing paediatric training and nurses working in the paediatric departments filled up a pre-designed questionnaire. Relevant variables were compared between doctors and nurses. Three hundred fifty-five health personnel were enrolled. Of these 49.3% had incurred needle stick injury at least once, 36.7% doctors and 54.9% nurses (p=0.002). Results shows that Needle-stick injuries are common among Paediatric health care personnel and their knowledge about prevention strategies is suboptimal. (Farideh Shiva, 2009)

A study conducted in United Kingdom Surveillance for Significant Occupational Exposures to Blood borne Viruses in Healthcare Workers scheme.914 incidents were reported to the scheme between 2006 and 2007. Percutaneous
injuries involving hollow bore needles remain the most commonly reported occupational exposures in the healthcare setting. HCV exposures to infected source patients remain the greatest proportion of percutaneous exposures reported. Of concern, is that over a third of incidents occurring between 2000 and 2007 in the ward or in A&E (43% and 37% respectively), and around 20% in ITU and in operating theatres (22% and 20% respectively) were preventable with proper adherence to universal precautions and safe disposal of clinical waste. (Health Protection Agency report 2008)

A study was conducted to know under-reporting of needle stick injuries continues to be a problem and the need to educate healthcare workers has been strongly re-emphasized, used cluster randomization to assess the impact of educational interventions on primary health care workers knowledge of the management of occupational exposure to blood or body fluids. Medical and dental practices were randomized to four groups. Staff in the first group received no educational interventions, staff in another group received a flow chart about the management of blood/body fluid exposures, staff in a third group received an e-mail with the flow chart, and staff in the last group received an oral presentation of the information in the flow chart. Staff knowledge was assessed afterwards using a postal questionnaire. The study found that only 80% of workers who were exposed to blood/body fluids thought they were at risk of exposure to BBV. 16% of “at risk” staff had not been immunized against hepatitis B, 48% of at risk “staff had not received training about BBV There is a need for education of “at risk” primary health care workers. (Krishnan et al. 2007)

A study conducted in community to examine the compliance with standard precautions by community nurses and discussed strategies aimed at improving compliance with one of these elements i.e. sharps management. The review highlights that there is a lack of statistics about needle stick injuries in primary care and under-reporting a problem. 21% of nurses reported having sustained a needle stick injury while working in the community. Re-sheathing needles in the community has been identified.13.5% of injuries occurred either during or after taking blood. Poor disposal of sharps causes problems with injuries and 26% of community nurses rated their knowledge of standard as inadequate. Future research needs to identify how the behavior of community practitioners can be influenced to reinforce compliance with infection control precautions, thereby minimizing inoculation injuries. (Cutter, J. and Gammon J. 2007).

A study was conducted to investigate the frequency and causes of needle stick injuries in a German university hospital. Data were obtained by an anonymous, self-reporting questionnaire. We calculated the share of reported needle stick injuries, which could have been prevented by using safety devices. 31.4% of participant HCWs had sustained at least one needle stick injury in the last 12 months. A wide variation in the number of reported needle stick injuries was evident across disciplines, ranging from 46.9% among medical staff in surgery and 18.7% among HCWs. Of all occupational groups, physicians have the highest risk to experience needle stick injuries 55.1%. Evaluating the kind of activity under which the needle stick injury occurred, on average 34% of all needle stick injuries could have been avoided by the use of safety devices. Taking all medical disciplines and procedures into consideration, safety devices are available for 35.1% of needle stick injuries sustained. There is a high rate of needle stick injuries in the daily routine of a hospital. The rate of such injuries depends on the medical discipline. Implementation of safety devices will lead to an improvement in medical health and safety. (Sabine Wicker 2007)

A study conducted on occupational exposure to blood and body fluids poses a potential risk for transmission of infection to healthcare workers (HCWs). On the assumption that any patient could be carrying potentially pathogenic microorganisms, measures must be put in place to protect staff from potential infections far as possible both by minimising the likelihood of injury and by facilitating treatment in the event of an injury. Within the UK, surveillance for England,
Wales and Northern Ireland has revealed that from 1997 until 2004 nine healthcare workers have sero converted to hepatitis C and one to HIV following occupational exposures (Health Protection Agency (HPA) Report, 2005). As sharps injuries are one of the most common types of injury to be reported to NHS Scotland Occupational Health departments by staff, according to the Scottish Executive’s strategy document Towards a Safer, Healthier Workplace (1999), prevention is crucial. Therefore there are no recommended changes to guidance contained within this model policy. (Health protection agency 2005)

According to CDC survey results may underestimate the risk to healthcare workers because it uses the population prevalence for the U.S. population as an estimate of the prevalence of these viruses in persons seeking medical care. Prevalence rates for persons seeking care will be different, and for some populations, the prevalence rates will be much higher. Studies show prevalence rates as high as 76.9 percent for HCV and 65.7 percent for HBV for some inner-city injecting drug user populations and HCV rates as high as 10.4 percent for patients in dialysis units. (Central disease Classification survey 2005)

A study was conducted to evaluate the frequency of needle stick injuries (NSI), to explore the circumstances, and to identify the high risk areas, workers’ perception of risk of blood borne disease, and their level of adherence to universal guidelines. Questionnaires were given to the participants, and they were asked to cite NSI they had (during January 2 April 2004), the probable reasons and place of occurrence, their physical and psychological reactions, and their knowledge, attitude, and practice of pre-exposure prophylaxis (such as use of gloves) and post-exposure prophylaxis (PEP). Questionnaires were given to the participants, and they were asked to cite NSI they had had (during January 2 April 2004), the probable reasons and place of occurrence, their physical and psychological reactions, and their knowledge, attitude, and practice of pre-exposure prophylaxis (such as use of gloves) and post-exposure prophylaxis (PEP). Comprehensive programmes to prevent NSI, including educational activities, incident reporting, and monitoring of NSI cases may minimize the high cost of an NSI and its associated psychological trauma. (G. V. Ganapathy 2004).

A descriptive, correlational study was conducted to determine the relationships between e institutional and personal demographic factor knowledge, observation of environmental risk factors, and the degree of nursing student compliance with standard and transmission-based precautions for the prevention of transmission of infectious diseases by needle stick injury. Useable data was collected from 710 nursing students enrolled in clinical courses. The typical respondent was female, between the ages of 20 and 29, and in the upper level of the curriculum. Most students (>90%) received instruction either before or during the first clinical course. The conclusions presented in this section are derived from the findings of this study. Nursing students’ knowledge level of factors related to disease transmission by needle stick injury, including recommended practices of needle safety, is inadequate. (Cynthia Ann Logan 2002).

The federal needle stick Safety and Prevention Act were enacted to address an epidemic of needle stick injuries. The law has made many workplaces safer, yet we know that too many health care professionals are still in danger. (Federal needle stick safety injury 2001)

METHODOLOGY

The present chapter enumerates the Research approach, Research design, Setting, Population, and Main study. The following paragraphs details the above mentioned areas of the present study.
Research Approach

Quasi experimental approach was used to examine the variability of subjects before and after the intervention. Effectiveness of education on Needle stick injury was assessed before and after Intervention.

Research Design

In this study Quasi experimental design was adopted. A pretest followed by education on Needle stick injury and post test was conducted. Both Pre test and post test design was adopted in same group to test the effectiveness of education on Needle stick injury.

Setting

The present study was conducted at Sri Ramakrishna Hospital in Avarampalayam, Coimbatore. There are around 350 staffs working at Sri Ramakrishna Hospital which is 580 bedded multispecialty hospital including advanced facilities.

Population

Nursing personnel between the age group of 21 to 35 years are working at Sri Ramakrishna Hospital.

Criteria for Sample Selection

• For data collection sample were working nursing personnel.

• Sri Ramakrishna Hospital was selected for the present study.

• Age group of the staff nurses was between 20 to 35 years

• Nursing personnel were willing to participate in study.

Sampling

The convenient sample of 50 staff nurses working at Sri Ramakrishna Hospital were selected and their age group was between 20 to 35 years selected for the study.

Tools for Data Collection

Demographic Profile: Demographic profile consists of sample no, name of institution, type of institution, total year of experience, experience in different areas, department, and unit which belongs and age.

Questionnaire for Assessing Knowledge of Prevention of Needle Stick Injury: The main questionnaire consists of 20 questions of which is related to knowledge on prevention of needle stick injury.

Scoring and Interpretation: There were 20 statements which were all open ended statements

Questions=> 5, 6, 8, 9, 11, 12, 13, 14, 15, 16, 18, 19, and 20. If yes=1 no=0

Question=> 2 if answered two correct means score is = 2.

if answered one correct means score is = 1.

in correct answer score is - 0.

if one answered one correct means score is - 1.
if they answered two correct means score is - 2
if they answer three correct means score is - 3
Questions=>3, 4, 7, 10, 17
By giving all correct answers the score is - 3 if they marked
Score interpretation= obtained score *100
                    _______________________
                    Total score

Main Study

The study was conducted from 26-3-2012 to 5-4-2012 at Sri Ramakrishna Hospital. The study were performed by following the formal procedure in order to develop the guide for the collection of data in a standardized fashion.

The investigator introduced herself and developed rapport with the participants, explained about the purpose of the study and verbal consent were obtained from 50 participants. The 50 samples were selected in randomized manner from various departments of nursing. Each sample was assessed to see the knowledge of needle stick injury prevention. After the assessment, education was imported for prevention of needle stick injury through self instructional module. The questionnaire contains 20 question. The question were read one by one and doubts were clarified. The average time taken was 30 minutes.

After assessment of knowledge, education through self instructional module on prevention of needle stick injury was given. After a day of interval reassessment of knowledge on prevention of needle stick injury was done, scoring and interpretation was done and it shows that there was an significant difference in knowledge level.

TECHNIQUES OF DATA ANALYSIS AND INTERPRETATION

Score was given and results of pre test and post test were compared to find out the effectiveness of self instructional module on prevention of needle stick injuries. Collected data were statistically processed. The obtained research was implemented after a statistical analysis.

\[ T = \frac{d}{SD} \sqrt{\frac{n}{2}} \]

\[ SD = \sqrt{\frac{\sum (d - \bar{d})^2}{n}} \]

\[ d = \sum d/n \]

\[ d = x_1 - x_2 \]

Where

\[ d = \text{mean of difference between pretest and post test} \]

\[ SD = \text{standard deviation} \]

\[ X_1 = \text{pretest score} \]

\[ X_2 = \text{post test score} \]
DATA ANALYSIS AND INTERPRETATION

This chapter represents the method of analysis and interpretation of data. The study was done to assess the effectiveness of self instructional module on prevention of needle stick injury among nursing personnel in SRH. The findings were tabulated, analyzed and interpreted in this chapter. The data was computed using descriptive and inferential statistics.

SECTION-I

The demographic data consists of age, sex, total years of experience and different areas of experience. The data collected are presented in the form of tables and graphs.

Table 1: Distribution of Respondents by Different Department

<table>
<thead>
<tr>
<th>Departments</th>
<th>No of Participants</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiology</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Pulmonology</td>
<td>6</td>
<td>12</td>
</tr>
<tr>
<td>Medical</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Intensive Care Unit</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>Emergency</td>
<td>12</td>
<td>24</td>
</tr>
<tr>
<td>Operation Theatre</td>
<td>6</td>
<td>12</td>
</tr>
<tr>
<td>Paediatric</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Special Ward</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>Labourward</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Neuro Ward</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

The distribution of demographical variables of staff nurses in different department shows that 6% were from cardiology, 12% were from pulmonology, 8% were from medical, 20% were from ICU and 24% were from emergency, 12% were from operation theater, 2% were from paediatric,10% were from special ward, 2% were from labour ward, and 2% were from neuro ward.

Figure 1: Distribution of Demographical Variables of Staff Nurses in Different Department

Table 2: Distribution of Respondent by Total Years of Experience

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Participants</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-3yrs</td>
<td>43</td>
<td>86</td>
</tr>
<tr>
<td>4-6yrs</td>
<td>6</td>
<td>12</td>
</tr>
</tbody>
</table>
This distribution shows that 86% were having experience of three years, 12% were having experience of 4-6 years and 2% of personnel were having 7-9 years of experience.

![Figure 2: Distribution of Respondents by Total Years of Experience](image)

<table>
<thead>
<tr>
<th>Age Groups</th>
<th>No of Persons</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-23yrs</td>
<td>36</td>
<td>72</td>
</tr>
<tr>
<td>24-26yrs</td>
<td>13</td>
<td>26</td>
</tr>
<tr>
<td>27-29yrs</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>30-32yrs</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

This distribution shows that 74% were having experience of particular one area, 18% were having experience at two area and 8% of people were having more than two area of experience.

![Figure 3: Demographical Distribution of Different Areas of Experience](image)

<table>
<thead>
<tr>
<th>No of Areas</th>
<th>Participants</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>One Area</td>
<td>37</td>
<td>74</td>
</tr>
<tr>
<td>Two Area</td>
<td>9</td>
<td>18</td>
</tr>
<tr>
<td>Three Area</td>
<td>4</td>
<td>8</td>
</tr>
</tbody>
</table>

This demographical distribution shows that 72% of people were belonging to 20-23yrs, 26% of people were between the age group of 24-26 years, 2% were belonging to 30-32yrs.
The latter shows there was significant difference in the scores of pretest and post test knowledge. The education given to nursing personnel was effective. The mean value of pretest was 18.18 and post test was 26.94. The mean percentage of pretest was 36.36% and post test was 53.38%. The standard deviation of pretest was 2.72 and post test was 1.95. The mean difference between pre test and post test was 17.02.
RESULTS AND DISCUSSIONS

This chapter attempts to interpret the results obtained by data analysis and the discussed findings and limitations of the study. This study is conducted at Sri Ramakrishna hospital, Coimbatore.

The aim of the study is to assess the effectiveness of self instructional module on prevention of Needle Stick Injury among Nursing Personnel in Sri Ramakrishna Hospital, Coimbatore.

ANALYSIS OF DEMOGRAPHIC VARIABLES

Age

The demographic variable of the samples were studied and discussed in details, the findings revealed that 36% of the staff nurses belong to the age group of 20-23 years, 26% were found to be in the age group of 24-26 years, 2% were found to be in the age group of 30-32 years.

Departments

The distribution of demographical variables of staff nurses in different department shows that 6% were from cardiology, 12% were from pulmonology, 8% were from medical, 20% were from ICU, and 24% were from emergency, 12% were from operation theater, 2% were from paediatric, 10% were from special ward, 2% were from labour ward, and 2% were from neuro ward.

Total Experience of Nursing Personnel

This distribution shows that 86% were having experience of three years, 12% were having experience of 4-6yrs and 2% of personnel having 7-9 yrs of experience.

Different Areas of Experience

This distribution shows that 86% were having experience of three years, 12% were having experience of 4-6yrs and, 2% of personnel having 7-9 yrs of experience.
Total Years of Experience

This distribution shows that 86% were having experience of three years, 12% were having experience of 4-6yrs and 2% of personnel having 7-9 yrs of experience.

Sex

Demographical Data presented reveals that 96% were females and 4% were male.

Comparison on Level of Knowledge before and after Intervention

This table 6 shows that there is a significant difference between the pretest and post test knowledge score. The education given to nursing personnel was effective. The mean value of pretest was 18.18 and post test was 26.94, the mean percentage of pretest was 36.36% and post test was 53.38%, the standard deviation of pretest was 2.72 post test was 1.95. The mean difference between pre test posttest was 17.02. The ‘t’ value computed as 18.32 which reveals that significant difference were between pretest and post test. This difference is statistically significant. This indicates that Education was Effective in Prevention of Needle Stick Injury. This may suggest that periodical programme to the nursing personnel would increase knowledge on prevention of needle stick injury.

DISCUSSIONS

On analysis the main findings of the study shows that the intervention was found to be effective.

SUMMARY AND CONCLUSIONS

The present study was conducted to find the effectiveness of self instructional module on prevention of needle stick injury among nursing personnel in Sri Ramakrishna hospital. Several studies have revealed that the nursing professional were having high risk of getting needle stick injuries. Keeping this review the researcher aimed at reducing the occurrence rate, promoting safe injection practices, education on post exposure prophylaxis among nursing personnel. The total sample size was 50.

The study was conducted at Sri Ramakrishna hospital, Avarampalyam, Coimbatore. The duration of study was from March 26-3-2012 to 5-4-2012, nursing personnel were selected for this study.

Fifty samples were taken. By using questionnaire method, the instrument for data collection was prepared by the investigator and data was collected by means of structured questionnaires. The assessment knowledge on prevention of needle stick injury done through questionnaire. The questionnaire contains 20 questions. The questions were read one by one and doubts were clarified. The average time taken was 30 minutes.

After assessment of knowledge, education was given through self instructional module. After a day reassessment was done, scoring and interpretation was done and it shows that there was an increased score of knowledge level.

Major Finding of the Study

The ‘t’ test was used to find out the effectiveness of self instructional module on prevention of needle stick injury the pre test mean value was 18.18 and post test mean value was 26.94

The calculated ‘t’ value is 18.32 THAT is greater than tabulated value of 0.05 level of significance. So there is a significant different between pre test and post test.
Since there is a significant difference between pretest and post test values So, Self instructional module on Prevention of Needle stick Injury was effective.

Limitation

The limitation of the study were,

- The study was conducted in single hospital.
- Education was done with self instructional module.
- The data collection period was limited for 14 Days only.
- The project was conducted among 50 nursing personnel only because of short duration.

Recommendation

- The standard protocol to be formulated for prevention, control, treatment and it has to be revised periodically in relation to prevention of needle stick injury
- In service education programme has to be provided to the newly appointed nurses in prevention, control, treatment of needle stick injury.
- The intervention can be reinforced as a regular practice in hospital settings.
- Similar study can be replicated in other settings.
- An extensive experimental study can be conducted for larger number of samples in the health care settings.

NURSING IMPLICATION

Nursing Education

In service education programmes were included in the nursing curriculum. It has to be updated to include newer technological devices in injection providing and handling also discarding of the used needle.

Nursing Administration

The administration can draw written policies regarding this method of intervention to reduce incidences of needle stick injuries. There by the nursing personnel are kept in pace with the evidence based practice.

Nursing Research

The study has tested the effect of education on prevention of needle stick injury. Importance of research in this field is beneficial to prevent the further protection of nurses wellbeing.

CONCLUSIONS

The study was under taken to evaluate the effectiveness of self instructional module on prevention of needle stick injury among nursing personnel. The mean percentage of knowledge of prevention of needle stick injury among nursing personnel was increased, there is significant difference in the score of pretest and post test which shows that increased knowledge level among nursing personnel. Hence, this study was effective.
REFERENCES


