

Needle Stick Injuries among Nurses

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ABSTRACT

The cross sectional study was undertaken to assess the prevalence of Needle stick injuries among nursing personnel, the circumstances under which these occur and to explore the knowledge of nurses on prevention of needle stick injuries in selected tertiary care hospital at Chennai. The sample consisted of 80 Nurses. The results showed large percentage (49.09%) of nurses reported having had on NSIs in their last 12 months. The commonest clinical activity to cause NSI was emergency situation (76.36 %), followed by recapping of needle (51.82%) and suturing (44.55%). The practice of recapping of needle still prevalent among Nurses (78.18%). Some nurses also revealed that they disassemble the used needles before discarding (61.82%). It was alarming to note that only (61.82%) nurses knew about the post exposure prophylaxis and (72.73%) of Nurse didn't report the Needle stick injuries. The present study showed a high occurrence of NSI in nurses with a high rate of ignorance and apathy. These issues need to be addressed, through appropriate education and other interventional strategies by the hospital infection control committee.

Key words: Knowledge, Needle-stick injury

SAVE NEEDLES SAVE LIVES IT IS THE LAW

(ANA)

Healthcare settings are constantly exposed to

numerous occupational hazards. Needle - stick injuries among health care workers are a recognized occupational health hazard. Health care workers in all types of settings are at risk for needle - stick injuries (Richard Fairfax, 1999). Needle-stick injuries have been an unfortunate healthcare reality for decades. For the past 20 years the needle-stick prevention story has evolved to encompass new legislation, new technologies and an emphasis on sharps safety education among healthcare providers. Still, the issues remain as to whether these measures are working; what has been learned from history; and what can be done to ensure the optimal safety for healthcare workers and the patients they are for. As a result of sharps injuries, more than three dozen US healthcare workers a year contract HIV, two thousand workers a year become infected with HCV and 400 contracts HBV (Mike Brown).

Needle-stick or sharps injury is a common occurrence among healthcare professionals and a significant health risk, especially for nurses and laboratory workers. Canadian Centre for Occupational Health and Safety (CCOHS) data indicate that some hospitals report one-third of nursing and laboratory staff suffer needle-stick injuries annually (CCOHS 2004). Whenever systems containing needles are used, disassembled or discarded, healthcare professionals are at risk to get accidental needle-stick injury. Needle-stick injury carries the possibility of exposure to any of more than 20 blood borne illnesses (Alam 2002). The most clinically significant of these illnesses are hepatitis caused by the hepatitis B virus (HBV) or the hepatitis C virus (HCV). As a result, prevention of needle-stick injury is a key occupational health objective (Lee JM, 2005).

OBJECTIVES

1. To determine the prevalence of needle -stick injury
2. To assess the factors associated with needle-stick



injury

3. To assess the existing knowledge of the nurses regarding needle-stick injuries.

4. To find out the relationship of knowledge on needle-stick injuries among nurses with selected demographic variables.

METHODOLOGY

Research design: The study adopted cross sectional research design used to assess the prevalence and the knowledge of the nurses on needle stick injuries.

Sample and Sampling Technique:

For this study according to Yamane's formula, sample size was 80 nurses. Simple random sampling technique were used

Setting of the Study

The study was conducted in selected tertiary care Hospital situated in Chennai.

Tools:

The tools were well prepared and expert validated. It contains two sections.

Section A: Demographic data

The first section of the tool consists of items related to data regarding personal and baseline characteristics of the Nurses. It includes age, sex, marital status, professional qualification, experience, previous training on universal precaution, hepatitis vaccination done.

Section B: it consists of 19 closed ended questions regarding Knowledge on needle stick injuries

Data Collection

The purpose of the research and procedure of data collection was explained to the concerned authorities in the hospital. Before investigation the researcher introduced her and the purpose of the study was explained and the confidentiality of the subjects was assured and oral consent was obtained from nursing Personnel. Data were collected by using a structured interview schedule.

Validity and reliability:

In order to establish the reliability of the tool, test-retest

method was used for assessing the knowledge, attitude and practice questionnaires. Respondents were randomly chosen and the questionnaire was administered twice with the gap of one week between the first and second administration. Karl Pearson's correlation 'r' was computed for finding out the reliability. It was found that reliability of questionnaire was 0.90. Which was highly positively correlated. So the tool was found to be highly reliable for final study.

Pilot Study:

The researcher conducted the pilot study to find out the feasibility of undertaking final study and to decide plan of statistical analysis. It was effective and feasible. The pilot study subjects were not included in the study.

RESULTS AND DISCUSSION

Majority of the Nurses were female (60%). The majority of the respondents comes under age group of 20-30 yrs. 64% of respondents had below 10 years of working experience. Among 80 Nurses (79.09%) of the subjects have received hepatitis B vaccine and (90.91%) had attended training on universal precaution.

In relation to analysis of overall knowledge score on biological hazards and preventive measures of needle-stick injuries among nurse shows that 100% of the respondents were aware about needle-stick injury. Only minority did not know hepatitis B (13.64%) and hepatitis C (26.35%) can be transmitted by needle-stick injuries. (26.36%) did not know that they need to wear gloves during withdrawing needle from a patient. Majority (20.90%) of the Nurse were of the impression that needle should be recapped after use. Majority of the respondents also stated that they throw needles or sharps immediately after use in sharp bin (74.55%), and (61.82%) were disassemble needles or sharps with hand after use. Majority also stated that 101 (111.1%) they were separate the needles from syringes prior to disposal. Among respondents (80.91%) had needle-stick injury in the last one year. (90.91%) of the nurses participated the training on standard



precaution. (86.36%) of the respondents had considered needle-stick injury has to be reported.

Regarding, frequency of needle stick injuries in the last one year. Among 80 staff nurses(49.09%)had needle-stick injury at least one time. (9.09%) had more time in the last one year. (24.55%) respondents can't remember how many times they had needle-stick injury.

Association between knowledge scores of the nurses with selected demographic variables the result showed significant association $p > 0.05$ between education status and experience of the nurses.

CONCLUSION

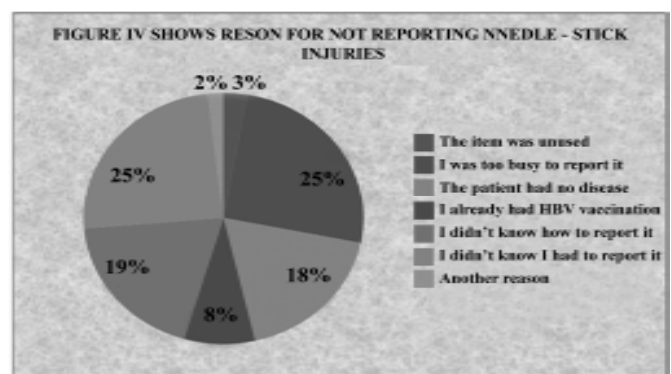
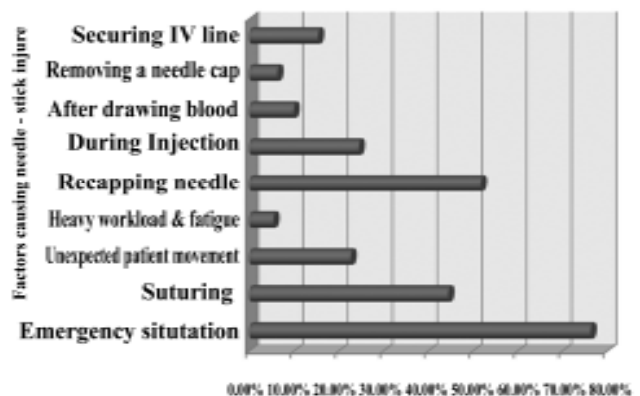
Occupational disease burden in India is growing at unprecedented pace. As a result of market liberalization and globalization, the profile of occupational disease has changed. Proportionate training of human resources in occupational health and safety has not taken place in our country. The results of this study confirm the importance of the need for an increased awareness of the risk of needle-stick injury, the need to provide the training and education of health care workers in the reporting of injuries and in standard operating procedures and also to put in place a proper framework to provide support and follow-up for those who sustain needle stick injuries. Several suggestions have been made for preventing and limiting sharp injuries among health care workers.

Lastly, exposure to blood borne pathogens is a harsh reality that one has to comprehend and be committed to prevent. Clearly transmission of these potentially infectious pathogens can be minimized by adopting effective precautionary measures. As needle-stick injuries are the commonest source of occupational exposures to blood and body fluids. We need imaginative thinking, diligent commitment, renewed advocacy, innovative funding and more efficient implementation.

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Figure III shows distribution of factors causing needle - stick injury



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