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Research Article

**FREQUENCY OF NEEDLESTICK INJURIES AMONG NURSES
WORKING IN DIFFERENT HOSPITALS**¹Yusra Chishti, ²Khadija Muhammad, ³Bilal Ahmed¹Akhtar Saeed Medical and Dental College Lahore²Quaid-e-Azam Medical College Bahawalpur³DHQ Hospital Mianwali

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Abstract:

Objective: To determine the ratio of needlestick injuries among nurses working in different hospitals. **Material and Methods:** Total of 135 nurses was included in this study. A predesigned questionnaire was served. Data was collected and analyzed in SPSS 23.0. **Results:** Mean age of the nurses was 34.284 ± 7.00 years. A total of 62 nurses (50.40%) had suffered from needlestick injury during their work. Out of these 62 nurses, 43 (34.95%) were student nurses and 19 (15.44%) were fully trained nurses. **Conclusion:** Nurses who are less trained or have not educated about safety measures while handling needles undergo more needlestick injuries.

Keywords: Needlestick, blood-borne diseases, nurses, health professionals.

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INTRODUCTION:

A needle stick injury occurs when someone encounters a needle prick that is stained with blood or other body fluids. According to the World Health Organization (WHO), around 2 million needlestick injuries were reported in 2007^{1,2}. As per the US Occupational Safety and Health Administration (OSHA) around 5.6 million individuals are at risk of blood-borne diseases due to occupational exposure or percutaneous injuries³.

Despite the fact that after a needle stick injury, acute symptoms are minor and insignificant, but these type of injuries are usually responsible for the transmission of blood-borne viruses e.g. Human immunodeficiency virus (HIV), Hepatitis C (HCV), and Hepatitis B (HBV). In the year 2000, one thousand cases of HIV, sixteen thousand cases of Hepatitis C and sixty-six thousand cases of Hepatitis B were reported by WHO due to needlestick injuries⁴. According to some studies, these types of injuries transfer more than twenty-five blood-born infectious viruses.

These types of injuries are usually common in health professionals because they deal with the needles frequently i.e. in wards, operation theaters, and outdoor departments, etc. But persons from the other occupations can also suffer from these types of injuries, for example, tattoo artists, laborers or agricultural persons⁵.

This study was conducted in order to determine the frequency of needlestick injuries among nurses who were working in different hospitals. This study will help us in exploring the risk factors for these types of injuries and formulating the safety measures in order to reduce these injuries.

MATERIAL AND METHODS:

A total of 135 female nurses from different hospitals were included in this cross-sectional study. The purpose of the study was explained and informed consent was taken from them. A predefined questionnaire was served. The data was collected and analyzed with SPSS Ver. 23.0. The qualitative variables were presented as numbers and percentages. The quantitative variables were presented as mean and standard deviation.

RESULTS:

Out of 135 nurses, we received a response from 123 nurses, so the response rate was 91.11%. Mean age of the nurses was 34.284 ± 7.00 years. Minimum age noticed was 23 years and maximum age noticed was 46 years. Out of 123 nurses, 74 (60.10%) were student

nurses and 49 (39.83%) were fully trained nurses. Total of 55 nurses (44.71%) reported that they were trained for the safety measures in order to prevent needlestick injuries.

Among 123 nurses, a total of 62 nurses (50.40%) had suffered from the needlestick injury during their work. Out of these 62 nurses, 43 (34.95%) were student nurses and 19 (15.44%) were fully trained nurses. Distribution of these injuries is presented in Table.

Procedure while having injury	Student Nurses	Fully Trained	Total
Intravenous lines	15	3	18
Drawing blood samples	12	4	16
Surgical procedure	9	9	18
Waste disposal	7	3	10
Total	43	19	62
Knowledge of Safety Measures	18	37	55

DISCUSSION:

In our study, 62 nurses (50.40%) sustained needlestick injuries. According to the literature mostly nurses are likely to sustain needlestick injuries. Different studies have documented different ratios of needlestick injuries i.e. thirty percent in Turkey, sixty-eight percent in Jordan and seventy-four percent in South Korea⁶.

In our study, 55 nurses (44.71%) were trained about the safety measures. Even after the proper training and education, this high ratio of needlestick injuries among nurses brings our attention to the importance of adherence to the infection control precaution and implementation of these guidelines among the health professionals.

In our study 68 nurses (55.28%) didn't receive this education throughout their professional career. This includes student nurses as well as trained nurses. In a study by Manzoor et al, this ratio was found to be 8% only⁷. The reason for this difference might be studying setting or inclusion criteria of the researchers.

There are certain limitations to our study i.e. we included only nurses and a smaller number of nurses in this study. A study with a greater number of health professionals including doctors, medical technicians, and waste management staff should be conducted in order to analyze this problem deeply and set suitable guidelines to prevent this.

CONCLUSION:

Nurses who are less trained or have not educated about the safety measures while handling needles undergo more needlestick injuries.

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