



CODEN [USA]: IAJPB

ISSN: 2349-7750

**INDO AMERICAN JOURNAL OF
PHARMACEUTICAL SCIENCES**<http://doi.org/10.5281/zenodo.3564688>Available online at: <http://www.iajps.com>

Research Article

**FREQUENCY OF NEEDLESTICK INJURIES AMONG
DOCTORS**¹Mehboob Ishaq Goraya, ²Soiba Aslam, ³Ahmarin Zahid¹THQ Hospital Layyah²Muhiuddin Islamic Medical College Mirpur³Islamic International Medical University Rawalpindi**Abstract:**

Objective: To determine the frequency of needlestick injuries among doctors working in different hospitals. **Material and Methods:** Total of 125 doctors was included in this study. A predesigned questionnaire was served. Data was collected and analyzed in SPSS 23.0. **Results:** Mean age of the doctors was 34.284±7.00 years. A total of 61 doctors (48.8%) had suffered from needlestick injury during their work. Out of these 61 doctors, 42 (33.65%) were house officers and 19 (15.2%) were postgraduate residents. **Conclusion:** House officers who are starting their medical training and are not yet educated about safety measures while handling needles undergo more needlestick injuries.

Keywords: Needlestick, blood-borne diseases, doctors, health professionals

Corresponding author:

Mehboob Ishaq Goraya,
THQ Hospital Layyah

QR code



Please cite this article in press Mehboob Ishaq Goraya *et al.*, *Frequency Of Needlestick Injuries Among Doctors.*, *Indo Am. J. P. Sci.*, 2019; 06(12).

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 type of injuries transfer more than twenty-five blood-born infectious viruses.

These type 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 type of injuries, for example, tattoo artists, laborers or agricultural persons⁵.

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

MATERIAL AND METHODS:

A total of 125 male and female doctors 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:

Mean age of the doctors was 34.284±7.00 years. Minimum age noticed was 23 years and maximum age noticed was 46 years. Out of 125 doctors, 82 (65.60%) were house officers and 43 (34.4%) were postgraduate residents. Total of 82 house officer, 23 (18.4%) reported that they were not properly educated, trained for the safety measures in order to prevent needlestick injuries. A total of 61 doctors (48.8%) had suffered from needlestick injury during their work. Out of these 61 doctors, 42 (33.65%) were house officers and 19 (15.2%) were postgraduate residents.

Distribution of these injuries is presented in Table.

Procedure while having injury	House Officers	Postgraduate Residents	Total
Waste disposal	8	4	12
Surgical procedure	9	7	16
Drawing blood samples	11	4	15
Intravenous lines	14	4	18
Total	42	19	61

DISCUSSION:

In our study, sixty one doctors (48.8%) sustained needlestick injuries. According to the literature most of the health professionals 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, 42 (33.65%) were house officers and 19 (15.2%) were postgraduate residents. Even after the proper training and education, this high ratio of needlestick injuries among doctors brings our attention to the importance of adherence to the infection control precaution and implementation of these guidelines among the health professionals.

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

CONCLUSION:

House officers who are starting their medical training and are not yet educated about safety measures while handling needles undergo more needlestick injuries.

ROLE OF AUTHORS:

Mehboob Ishaq Goraya: Writing the Paper
Soiba Aslam: Data Collection and Analysis
Ahmarin Zahid: Editing and Proofreading

REFERENCES:

- 1- Alamgir H, Yu S. Epidemiology of occupational injury among cleaners in the healthcare sector. *Occupational medicine*. 2008 Mar 19;58(6):393-9.
- 2- Wicker S, Ludwig AM, Gottschalk R, Rabenau HF. Needlestick injuries among health care workers: Occupational hazard or avoidable hazard?. *Wiener Klinische Wochenschrift*. 2008 Aug 1;120(15-16):486-92.
- 3- Kirchner B. Safety in ambulatory surgery centers: occupational safety and health administration surveys. *AORN journal*. 2012 Nov 1;96(5):540-5.
- 4- United States General Accounting Office. Occupational Safety: Selected Cost and Benefit Implications of Needlestick Prevention Devices for Hospitals.
- 5- Elmiyeh B, Whitaker IS, James MJ, Chahal CA, Galea A, Alshafi K. Needle-stick injuries in the National Health Service: a culture of silence. *Journal of the Royal Society of Medicine*. 2004 Jul;97(7):326-7.
- 6- Smith DR, Leggat PA. Needlestick and sharps injuries among nursing students. *Journal of Advanced Nursing*. 2005 Sep;51(5):449-55.