Journal of Namibian Studies, 23 S1 (2018) : 19-24 ISSN: 2197-5523 (online)

Occupational Safety And Health Of Medical Laboratories

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Abstract:

Despite the growing interest in occupational safety and health, there has been little research on occupational safety and health in medical laboratories in developing countries, despite the fact that a large number of injuries occur without proper documentation. It is estimated that 6,300 people die every day from workplace accidents or work-related diseases, resulting in more than 2.3 million deaths each year. Medical laboratories use a variety of materials and potentially dangerous pathogens, exposing medical workers to many potential hazards. This study investigated the status of occupational safety and health in medical laboratories. Objectives included identifying biological, chemical, and physical hazards, reviewing control measures in medical laboratories, and listing factors that hinder the implementation of good occupational health and safety practices. The World Health Organization developed such guidelines to protect the health of workers involved in the investigation of diseases of others. Results**:**Training has the highest contribution to good OSH practices.

Keywords: Occupational safety and health, medical laboratories.

Introduction:

Occupational safety and health (OSH) has become an increasingly important issue over time. However, deficiencies still exist, with reports that more than half of workplace accidents and injuries go unreported or unnoticed, necessitating the introduction of the

Occupational Safety and Health Act (OSHA) in 2007, which was designed to provide a more comprehensive approach to workplace safety issues (Bohanish, 2003).

Medical laboratories currently employ more people than in previous years due to the fact that more clinical examinations are performed, so the need for technicians and technicians to perform tests has also increased. These employees are exposed to a variety of hazards associated with the equipment and methods they use in their work.

The dangers associated with the process of drug abuse may only be realized when an unforeseen illness, accident or even death occurs. It is well known that healthcare workers are at a higher risk of contracting bloodborne pathogens than the general population (Kajiado, 2017).

Study design:

Study design: Semi-structured key informant individual interviews were done over the course of a month as part of this cross-sectional study. One-on-one interviews facilitate the gathering of illuminating participant descriptions (Martin, 2013). The target population for this study consisted of all registered medical laboratories, and a purposeful sampling technique was employed. The health professionals received about 250 questionnaires and consent forms. Of those, 214 (85.6%) had their signatures returned by the participants. Additionally, 118 healthcare facilities that had medical laboratories were asked for institutional consent. 108 (91.53%) of these had consent forms that were properly signed and returned.

Hazards that are biological, chemical, or physical:

In the current survey, at least 65.6% of the respondents stated that they have been exposed to a biological hazard of some kind. Eighty percent of the respondents said they had been exposed to viruses, fungi, bacteria, or parasites, respectively. The majority of bacterial habitats around humans are either present as infections or as normal flora in digestive systems, which accounts for the high percentages of bacterial exposure. Furthermore, biological dangers can be found in the lab from a variety of sources, including other

workers, body tissues, cadavers, culture specimens, blood, and bodily fluids (Saunders, 2011).

Control measures to reduce OSH hazards:

According to the current study, the health facilities' main efforts to reduce OSH hazards were to provide first aid safety tools and equipment (36.8%), proper containers for disposing of medical waste (92.6%), and training and supervising staff on occupational safety and health (98%). Furthermore, according to our research, chemical hoods and chemical hygiene plans are present in 25.1% and 19.1% of the facilities, respectively. Our findings also show that 95.0% of laboratory personnel had received the BCG vaccination and the majority (87.0%) had undergone an HIV screening. According to our findings, the majority of laboratory personnel wash their hands before and after performing any process (76%) and after handling filthy items (58%). 72% of laboratory employees cleaned their hands before and after (Rawlance, 2015) .

Factors impeding the adoption of good occupational safety and health (OSH) practices:

Factors impeding the adoption of good occupational safety and health (OSH) practices: This study did not identify regression results for the factors that influenced the adoption of good OSH practices in healthcare facilities (34.9%). According to our findings, there was a correlation between the following factors and risk of exposure to hazards: inadequate resources (41.2%), inadequate training on occupational safety and health (29.4%), poor ergonomics (5.9%), ignorance among health workers (36.7%), poor design of the laboratory facility (36.7%), and a negative attitude toward OSH (55.9%). Our results also show that the best way to implement occupational safety and health practices is through training alone, with an increase in OSH training units translating into increases in each of the other practice areas. (Cooren,2011).

Recommendations:

This study shows that there is a lack of health workers with occupational health and safety training in medical laboratories.

- The laboratory environment can be a dangerous workplace.

- Laboratory workers are exposed to many potential hazards, including chemical, biological, physical, radiological and musculoskeletal hazards.
- Risk assessment is the backbone of occupational safety and health protection in laboratories.

The study adds:

- Special attention is paid to the various hazards faced by medical laboratory workers.
- The findings explain the importance of employers strengthening their institutional mechanisms to minimize occupational safety and health-related hazards.

Conclusion:

This study concluded that bacteria were the most common type of biological hazard (80%), handling of unlabeled and labeled chemicals (38.2%) were the most common type of chemical hazard, and hazardously placed laboratory equipment (49.5%) were the most common type of physical hazard in medical laboratories.The most vulnerable category of medical laboratory workers were young workers with 2-5 years of experience. The study further concluded that failure to wear personal protective equipment was a significant predisposing factor for exposure. There is a lack of qualified occupational health and safety personnel in medical laboratories, while occupational health and safety is least important in the healthcare sector. The study also concluded that occupational safety and health training for health workers should be strengthened as it contributes most to good practices in occupational safety and health. This study showed that there is a lack of health workers in the medical sector who have received occupational health and medical laboratories .

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