

Availability of Safety Measures and Knowledge Towards Hazardous Waste Management among Workers in Scientific Laboratories of Two Universities in Lebanon

Authors : Inaam Nasrallah, Pascale Salameh, Abbas El-Outa, Assem Alkak, Rihab Nasr, Wafa Toufic Bawab

Abstract : Background: Hazardous Waste Management(HWM). is critical to human health outcomes and environmental protection. This study evaluated the knowledge regarding safety measures to be applied when collecting and storing waste in scientific laboratories of two universities in Lebanon.Method: A survey-based observational study was conducted in scientific laboratories of the public university and that of a private university, where a total of 309 participants were recruited.Result: The mean total knowledge score on safety measures of HWM was 9.02 ± 4.34 (maximum attainable score, 13). Significant association ($p < 0.05$) was found between knowledge score and job function, years of experience, educational level, professional status, work schedule, and training on proper HWM. Participants had adequate perceptions regarding the impact of HWM on health and the environment. Linear regression modeling revealed that knowledge score was significantly higher among bachelor level lab workers compared to those with doctoral degrees ($p = 0.043$), full-time schedule workers versus part-timers ($p = 0.03$), and among public university participants as compared to those of the private university ($p < 0.001$).Conclusion: This study showed good knowledge concerning HWM in the scientific laboratories of the studied universities in Lebanon and a good awareness of the HWM on health and the environment. It highlights the importance of culture, attitude, and practice on proper HWM in the academic scientific laboratory.

Keywords : hazardous waste, safety measures, waste management, knowledge score, scientific laboratory workers

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