

The Risk Assessment on The Event of Illegal Chemical Dumping and Leakage in Sungai Lalang, Semenyih

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ABSTRACT

INTRODUCTION: A hazardous unknown chemical drum was reported illegally dumped and leak near the industrial area in Sungai Lalang, Semenyih Selangor. Initially, the report was made by nearby factory workers. The District Disaster Management Committee was activated. The Department of Environment and the chemical, biological, nuclear, radiation and explosion (CBNRe) team lead the investigating of this event. **METHODS:** Risk assessment was done together with multi-agencies involvement. Various laboratory samples were taken including a nearby sample from the leaked chemical drum, river water, soil, and air sampling were done. Mixed methods study designs were conducted for medical surveillance in the affected area. **RESULTS:** and discussion A total of 191 drums, in which 127 drums contained unknown chemical while the other 64 drums were emptily disposed of by The Kualiti Alam company. A preliminary result from the rapid test of the chemical was organic hydrocarbon which commonly used as a solvent. Medical surveillance among workers stay at red zone area was done, only three (3) workers seek medical attention and were managed as an outpatient. The common symptoms were cough and sore throat. Based on the risk rating, the risk of this events falls into high risk category. **CONCLUSION:** Collaboration with multiple agencies with good coordination is important in managing chemical pollutant. In term of risk assessment, multiple parameters including a sample from the environmental and medical surveillance are important to assess the severity of the event subsequently to come out with mitigation plan and follow up after the event.

KEYWORDS: Solvent, hydrocarbon, risk assessment, toxicologist, environmental health

To What Extent Do Psychological Factors Impact Work Engagement Among Malaysian Employees?

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ABSTRACT

INTRODUCTION: Psychological wellbeing is important because of its direct bearing on psychological connectedness or work engagement. We set out to determine levels of work engagement and to identify the psychological factors that predict it. **METHODS:** A total of 5,235 adults participated in a cross-sectional, questionnaire-based health survey in Malaysia. Work engagement was assessed with the 9-item Utrecht Work Engagement Scale (UWES-9). Higher UWES mean scores indicate greater levels of work engagement. Psychological distress was assessed using the 6-item Kessler scale (K6; cutoff score ≥ 13 , score range 0-24). Higher K6 scores indicate greater psychological distress. A multiple linear regression was performed to determine predictors of work engagement. **RESULTS:** A female preponderance was observed ($n=3,259$, 62.3%). Participant age ranged from 18 to 85 years (mean \pm SD: 33.88 \pm 8.83). The mean work engagement score on the UWES-9 was 3.53 (SD \pm 0.94). A total of 11 out of 18 variables on a multiple regression predicted work engagement, $F(18, 4925) = 69.02$, $p < 0.001$, $R^2 = 0.201$. Factors that predicted higher work engagement were age, marital status, education level, job type, job permanency, longer sleep length, lower psychological distress and no history of workplace bullying. **DISCUSSION:** Inadequate sleep, the presence of psychological distress and a history of work bullying were among key factors associated with poorer work engagement among Malaysian employees. All three are modifiable factors which can be targeted to improve work engagement.

KEYWORDS: work engagement, psychological distress, sleep, work bullying, Malaysia